VIRTUA FIGHTER 3: Exclusive pictures of 1996's most anticipated game. Page 68

PlayStation - Saturn - 3D0 - Nintendo 64 - PC CD-ROM - Arcade - M2 - Online

NEXT

GENERAT

Leading edge computer and video games

Gates Games

Is Microsoft planning to take over

the game industry? And what the

hell does Bill Gates know about

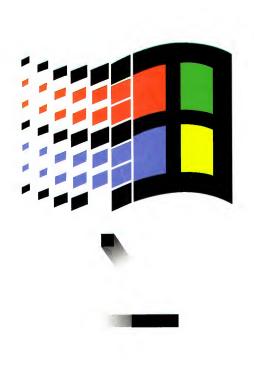
videogames, anyway? Page 6

volume two

18

to his first interview with a game magazine, Bill Gate raveals the strategy behind Microsoft's increased focus on the game market. Oh, and he also has a fav





PCs versus **Consoles**

Are the and consoles in competition? Some people say yes, **Bill Gates** Says **no**. Effect way, any discussion of **Microsoft's Windows 95** initiative — designed to make playing games on a PC more like playing videogames on a console — always acts as a catalyst for deciste.

As a household necessity, the PC's popularity has rocketed. Initially fueled by the dream of "multimedia," and now boosted further by the late of Internet access, the PC continues to make irroads into our homes. Games are then invited to foliou, or sneak in through the back door. Wherever there is a PC, you will be sure to find a PC game on to.

But there are equally compelling reasons why dedicated, low-cost (relatively, at least) game machines will continue to thrive:

- · Price: \$2,000 versus \$200? The smart money always bets low
- Dedicated Circuitry: A jack of all trades can never compete with a master of one (especially when playing on the master's home turf)
- . TVs vs. Monitors: Do you want to play in the living room or the home office?
- Motivation: Not one hardware company is betting its whole future on PC games.
 Sega and Nintendo have everything to lose
- The arcade connection: Ridge Racer or Virtua Fighter 2? No matter which flavor you choose, you have to play on a console
- "Get that thing outta here!" Every kid knows that game machines need to be easily portable, especially when morn complains about the noise...
- Nintendo: These guys have \$4.5 billion, cash, in the bank. This pretty much secures a rosy future

The fact is that POs and game machines will **continue to coexist.** And if this leads to a greater breadth and depth of **game styles**, who's complaining?





June 1996

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What the hell does Bill Gates know about games, anyway?

The answer may surprise you. In this world exclusive interview, the most successful entrepreneur on the planet waxes elequent on Microsoft's entry into the gaming market, the role of consoles versus PCs, why Trip Hawkins' 3DO Multiplayer falled, and plenty more



What's Microsoft's game? Curious about Microsoft's entry into the gaming market? Next Generation reveals the company's three-ferred gaming strategy and evaluates its chances for success. Will Microsoft '98 look like Niterato' 894. The definitive report starts on page 46



DVD: friend or foe?

The introduction of CD-ROM technology caused one of the major paradigms shifts in videogame history. DVD (Digital Video Disc) is the next big thing (holding seven times more data than a CD), but will games suffer as a result of its arrival?



News

Nintendo's color handheld announced * Segs ventures into them-park land *The divorce is final for Segs and M2 + More than 229 Japanese PlayStation games announced + Arcadia's new games



Alphas: 14 exclusive game previews
let a battle of 3D brawlers as Sega AM2's Wroso Fighter 3 faces off against Sega AM3's Lost Brans It's a PC samer's dream with world-exclusive looks at G.U.R.PS., Might and Mark II, and X-COM III











Finals: 26 new games reviewed

Featuring Silverload, Aken Trilogy (PlayStation) • Worms, Iron Storm (Saturn) • Morio RPG (Super NES) . Ripper, Wing Command IV (PC) . Street Fighter Alpha II, I 9XX (Arcade) . plus 17 more

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What the hell does Bill Gates know about games, anyway? How does Microsoft intend to coo on the game industry? And should we be afraid?

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of Next Generation by subscribing. Do it today ng hardware

Will DVD change the face

of videogames? CD-ROM will soon be replaced as a technology by Digital Video Disc. What does this mean to gamers?

What's Microsoft's game? From Softmage, to Flight Simulator, to Wi a game platform - Microsoft's game plan exposed

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Alphas

Games in development from around the world, previewed for your perusal, featuring: Virtua Fighter 3, Prop Cycle, Lost Bronx (Arcade); G.U.R.P.S., Dark Earth, Lards of the Realm II, Leisure Suit Larry 7, X-Cam III, Might and Magic II, G-Nome (PC); Wrinkle River Stary (Saturn): Raymon 2, Blost Chamber (multiple platforms); Killing Zone (PlayStation)

114 rating

Tense? Nervous? Headache? Avoid the unpleasantness of buying a crap game: rely on NG to review and rate each new tide for you. This month's games include: Sidewinder (PlayStation); Earthworm Jim 2, Shiring Wisdom (Saturn); Cyberid (3DO); Allied General, Descent II (PC); Street Fighter Alpha 2 (Arcade)

It's like petting paid to play games. In fact, it is petting paid to play games, and make them, too. Cool

147 corresponding

Letters Often controversial usually intelligent, occur funny, and - every now and then - about EGM!

150 theorizing

The way games ought to be... Hi-octane game theory from Chris Crawford. This month: what ever happened to the designers of yore

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Next Generation #19 arrives on newsstands on June 18 with an in-depth look at Sega Saturn's Nights All The Brutality, Carnage And Senseless Violence Of Darkstalkers.



Only Darker.

Just when you thought the Darkstolkers had reached their ultimate eril, they're back with a chilling twist. Night Warriors 1th features new secret moves, multi-hit cambas, dozzling animatian and even shadier characters in the year's most eagerly anticipated release. Now, you'll have a terrifying encounter with 10 of your treatherous favorites while bottling far your life with new or previously unplayable characters. So get ready to defend yourself against a world of deadly powers. You might survive to see the light,



















He's arguably the most powerful man in the world. His company, Microsoft, could gobble up Sega, Nintendo, Atari, and The 3DO Company faster than you can say "Windows 95." And many cynical observers wouldn't be surprised at all if it did. So, what is Bill Gates' game plan?

f course, one doesn't necessarily have to know how to beat Dr. Robotnik at the end of Green Hill Zone to run a successful same business. But it

would be nice to think that a man who wields so much power over us gamers at least knows his Command from his Conquer. And let's not for one minute underestimate Bill Gates' power. As the biggest consumer software company in the world, Microsoft has got serious muscles. And as its visionary leader, Gates gets to flex them.

But why has it taken Microsoft so long to notice the gaining world? And now that it has us firmly in its sight, is the \$6 billion (in annual sakes) gaint going to play rough, or prove itself to be a valuable addition to the garning community? While we're at it, telt gat a few of those niggling Windows 95 questions out of the way, And last, if Nitrendo's Howard Lincoln is correct in fearing that Microsoft wants to "steal his lunch," just how hungry is Bill Gates feeling?

Next Generation met with Bill at Microsoft's HQ in Redmond, WA, for the following world-exclusive interview.

What took Microsoft so long?

MG. Ghen has uccess of Microsoft Fight
Smultors, and the boom of the PC game industry.

Smultors, and the boom of the PC game industry.

May hasn't Microsoft put its fall weight behind an assault on the gaming world before?

Bill: We've always that dur hand in it to some degree. Putting one or two games in with the operating system has always been a good move, and you'll always see us do it. So we've always that a few titles, but mosts' developed ourside.

We saw the embarrassment of how hard it was to install games, and the conflicts between DOS games and productivity applications after we shipped Windows 3.1. And we saw it as sholding back the home computer marker. You really shouldn't have to have an expert friend to dig into your configuration file. And games were part of that. So part of [our goal] was making the PC a

more stable platform, having the games not destabilize the other things you were doing. NG: Of course, many of Microsoft's other projects have significance for the game market... Bill: The commitment to do the world's best graphics architecture, that started about three years ago, but these things take time. So we brought in the really smart people, and some of the super-advanced elements of this you won't see in the market for a couple of years. Then we'll be able to say, "Hey, we think we're way beyond even the most expensive Silicon Graphics workstation you can buy today, and at PC price-points." NG: So are the games Microsoft is developing primarily designed to showcase Windows 9S? Bill: No. it's to make money. And so you'll see a lot more titles coming out from us internally - a lot more than ever before - and game titles coming out of the joint venture with DreamWorks Interactive as well

NG: Let's forget Windows 95, and your other businesses for a moment. What do you feel Microsoft can bring to the party as a game developer? Why do you think gamers should welcome Microsoft's arrival to this genre? Bill: People who play games a little bit are going

to look at the individual games...

NG: You think that's how Microsoft's publishing effort should be appraised?

Bill: Ninety percent will. From 10% of the people you can get a notion that we really know how to test software; how to distribute software; how to take a long-term view of building very rich technologies into these games. Things like games that use voice input — that's going to happen, or games that are multiphiper in a very deep sense, interacting across the Net.

There's a lot of technology here, and having us be smarter about how we enhance the platform for games is probably good for the whole game industry. Even though we're very good at reaching out to third parties, I think having an internal game group will be part of that. I always







encourage our game group to give our platform guys a hard time - and vise versa. There's been some good results from that already NG: The flip side of the coin: To what extent should gaming's current major players fear Microsoft's arrival? (Nintendo of America's President Howard Lincoln expressed considerable respect for Microsoft, but claimed awareness that "They want to eat my lunch, sure").

Bill: [smiles] Well, not really. I mean, are game consoles and PCs in competition? In the most direct sense, in the sense that you walk in and choose between a Sega and a Sony, it's not quite the same. Usually, if you want a PC and the kind of richness and general purpose things that it provides (you know, bring your work home, write your homework, all that), then you generally know before you walk in to the store that you want that. It's possible that when you buy a PC, then you say, "Hey now I don't need to buy a game platform, I'll just do everything on my PC

We don't have a strategy to do a \$200 game console that is a direct competitor to what Nintendo, Sega, and Sony are doing and our business model isn't to charge software developers money. So, if you compare a Nintendo game, where you've got to have that big ROM that's very expensive and pay a royalty, versus a CD-ROM on the PC, where there's a zero royalty, it's quite different.

So even though the PC is more expensive and even though it'll edge down to the \$700 to \$800 range over the next two or three years, it is a very, very different price point to \$200. But when you buy games, you'll be able to find lowcost games in the \$20 to \$30 range for our platform. And the business model for the developers is more attractive at any price point.

Besides, we will be a smaller part of the game business on the PC platform than Nintendo is on the Nintendo platform, or Sony on the Sony platform, or Sega on the Sega platform. We're not hogging a broad range of games, nor do we have any prewired deals to bundle our games into any of these things.

So, yes, in a sense we're in competition. I mean, if we're promising to make graphics on the PC better than on a Silicon Graphics workstation, we sure as heck are going to make them better than on a \$200 game device. We've lagged behind (Sony's PlayStation handles texturing better than most PCs that are available), but the PCs you're going to start to see, maybe six months from now - certainly in the next 12 months - will be way beyond that.

PCs vs. consoles

NG: So you don't see either the PC or the dedicated game machines eventually dominating the market completely?

Bill: In terms of one totally wiping the other out, no. You know, I'm a PC lover and so I can tell you the schtick from somebody who's got a bias toward the PC. For every kid (with a PC) even at a very young age - there's really great learning software. It's worth it if you can afford it. It's great exposing them to that.

Then as they move up into the age where they want action games or whatever, then hey, the PC's going to be there. And it is the most flexible device. The fact that you can actually store things away, the fact that you can add on to it, the fact that it has a display with better resolution, it's got a keyboard. There's just a lot of things you can do with a PC you can't do with a game machine.

And so, I think as PCs have very high penetration into homes, it's possible there would be a substitution effect against game machines. But, that's not to say the game machine category won't be there

NG: One thing the PC doesn't have (that companies like Sega, Sony, and Nintendo have) is a dedicated marketing operation whose sole purpose is to promote each game console as the ultimate gaming platform. Are you willing to take on this role for the PC?

Bill: I'd say it's a role, and it's up to us to do that. Certainly to evangelize to software developers. that is totally our job. I think on a relative basis to a few years ago - and even on a relative basis to some of those game console suppliers - and in the absolute, I think you'd find that ISVs [independent software venders, a.k.a. game



Microsoft's handquarters in Redmond, WA, on the outskirts of Seattle, is lass than a five-minute walk from Nintando of America's offices

publishers] say we're doing a pretty good job. But it is our job to do the evangelism. Intel is often a help on these things, as are some of the

system manufacturers, some of the board and chip manufacturers. But we're in the lead spot.

I think content rules, in terms of a message

to consumers. Nowadays, you don't even see many ads about the consoles - you see ads about the games you can play on the console, or see the kid who seems to be playing these games looks like a pretty cool kid, and you'd be like him if you bought one. But, you know, it's really very content-driven nowadays as opposed to platform technology. I don't know, maybe it'll switch back. NG: Do you see content currently stronger on the PC, or on the game machines?

Bill: Well, I think boxing games are better on the dedicated consoles. But if you get really broad and include Myst-like games, I mean, give me a break! There you need the storage and richness that comes with a PC.

The term "game," is a very broad term. The phenomenon of what's gone on with the game consoles is a fairly narrow part. There's a particular demographic with which the game console is strong, but the PC is much broader than that. So they both have relative strengths. NG: But the console people would reply by pointing out that as long as a \$200 game console can do things that a \$2,000 PC can't do, there will

be a market for it. Bill: Oh, we're not going to have any more inversions like that. I mean, PCs will be a superset in every way - certainly all the PCs that ship in '97, and you'll never see that inversion re-emerge. NG: So you're saying that the PC's graphics power is going to take off and never look back? Bill: Well, it's my job to see that this happens. We are keenly aware of the comparison [between PCs and the 32-bit game machines] and I have almost no doubt we'll meet that test. The only advantage that the Sony PlayStation has is better texture mapping than most graphics cards in the PC. But when we demo'd at the Windows Hardware Engineering Conference [last April], the 3Dfx demo of Valley of Ra was way better than any game console. And that's a special add-in card that will be on PC motherboards in early '97. NG: Playing devil's advocate a little, we're going to champion game consoles. And one huge advantage that they have over PCs is that you play games on the big screen TV in the comfy living room. Whereas to play the PC you typically have to sit close to the screen, alone, in a straightbacked chair, in the "home office."

The console way is much more fun. Bill: Well, you have a very good point about the device that you sit close to and use with a keyboard, versus the device that you sit far away from. With the PC - because of the resolution of the screen - you can read text and you can sit



close to it. And it's got a keyboard. The TV is typically a larger-size screen and the dot-pitch isn't nearly as good, but you sit far away and you mostly watch video-type material. So for multiplayer [gaming], where you're both on the same screen, either you're going to [play on a game machinel or you're going to plug the PC in so that it's driving your TV. And there is more and

more of this going on. A lot of projection TV sets are going to have VGA connectors. And VGA-to-NTSC conversion is not very expensive. We need

to make that easy Part of the question here is, in your living room - in terms of choosing TV channels or choosing audio sources - the PC, which can display information in a rich way, may become a nice tool. I mean, it's a lot easier than picking buttons on things and stuff like that. If you go to the super high-end, like the audio-video system that Paul Allen has, or I have, then we have PCs where we pick any DVD disk, or laser disk, or CD audio disk we have a library and a database and we type the name and "boom," it's up there. That's a PC controlling our entertainment center. Well, that sort of thing actually will become reasonably priced for people. Anyway, the display issue you mention is a very interesting one. NG: But this is as much a battle of household territory as anything else, and the game machines have already erabbed the prime sameplaying locations; under the main TV, and in the kids rooms. Won't games inevitably be played in the living room and not the home office! Bill: For certain types of games, that's true.

Sometimes, you'll have a PC in the living room because it will be the central controller there. But, you're right, the scenario where you've got your game machine in the living room and you've Cen Bill Gates, the mo cessful entrepreneur of st level of success in the e industry?

"If we're promising to make graphics on the PC better than on a Silicon Graphics workstation. we sure as heck are going to make them better than on a \$200 game machine"

Moving more of Microsoft's geme development in-house has required some major retooling of its HQ (including the addition of an entire collection of classic ercade gemes)

But the game machine has a pretty narrow appeal, in terms of the demographic. For really young kds, for girls, and for a lot of adults, the breadth of software that's really been out there for the game machines is not very rich. It's not like people do encyclopedius, or movie guides, or learn arithmetic from videogames. NG: Now, is this because with no keyboard and

got your PC in the den, that may not go away.

no hard drive the game machines can't handle these types of software, or is it simply because the market hasn't asked for them yet? Bill: Well, I'm not sure how you separate those two things out!

You know, it was always possible that one of the game machine gays was going to create some expandability and essentially grow it up to a PC. It was the Philips system, called CD-4, which was sort of supposed to be expandable (in as much as a proposed to also be agamelaper type to go. It was supposed to also be agamelaper type to go. It was a few to go to the gamelaper type to go. It was a few to go to go

I can say that now because the thing falled be Philips pure rail money mote. Well, be Philips was worried about it. They pur read money into a threat their, and they had a lot of content. There was to evergetize to going on, and turne fairly was to evergetize to going on, and turne fairly was to every content. The properties that you had to here good scalon generation the things, to the hardware design and the to evergetize to never found. It was always too soft. A finite bit of golf or a little bit of golf or all their bits of golf

already pointed out — a \$2,000 PC can't do many action games as well as a \$200 game machine. Bill: Oh, I agree. But we're getting good action games. I mean, look at the number of things we've

done to get good action james onto the PC. Microsoft is congelle to even includes the software developers inside these game console companies. You'll see most of the game console companies taking their software assets and portring them over to the PC. That's a big step forward for us. We have an operation, which is a joint venture between us and Soffshare, game Bank. So if the developer of carridge game Bank. So if the developer of carridge games doesn't want to dig the PC conversion; in the soft of the soft of the properties of mental the soft of the soft of the Mental Wells we cannelle them took of Mental Mental Soffshare on the soft Mental Mental Soffshare on the soft Mental Mental Soffshare on the Mental

directly, So, I don't think there will be many action games that are on game consoles that aren't on PCs and I think there will be quite a few on PCs that aren't on a game console. NGG And where the two coincide the PC version will be competitive if not better? Bill: That's our job. And so if we fall short then, you know, then we say "OK, let's fix that." It's very hard for a device without scorage to come in very hard for a device without scorage to come in

and compete with a lot of these things. You want rich games to remember what level you're at, what you've done, and how to connect up to your friends.

Microsoft's game plan

NG: Microsoft is increasing its focus on the gaming industry in three major ways. First, now more than 50% of Microsoft-owned Softimage's revenues come from sales of graphics software to again developers. Second, Windows 95 now is being promoted as the best way to play games on a PC. Third, Microsoft is ramping (sentend on people).



Bill Gates (in beck) end Peul Allen (in front), she here in high school, founded Microsoft in 1975

action games, you'd better have some bit-twiddlers deeply involved or else it won't be that great"

"For good











HISTORY'S MOST FEARED MONSTERS AND MUTANTS ARE BOITING FROM THE ARCADE IN SEARCH OF A DARK ARENA FOR THEIR NEXT MIDNIGHT FIGHT FOR SUPREMACY. VICTOR'S COMING OVER WITH HIS SHOCKING THUNDERSTRIKE. FELICIA'S TRACKING IN PLENTY OF DIRT FOR HER LITTERBOX KICK, BISHAMON IS SWINGING BY HIS RAZOR-SLASHING DIVIDER. ALL THE EVIL POWERS AND DEVASTATING - MOVES OF THE TEN DARKSTALKERS YOU'VE COME TO FEAR ARE HEADED YOUR WAY. ALONG WITH HIDDEN SPECIAL MOVES, MID-AIR BLOCKS AND SUPER FATAL BLOWS TO MAKE YOUR PLAYSTATIONT SMOKE. SO LEAVE A LIGHT ON FOR THE DARKSTALKERS. AND TAKE DOWN YOUR DAD'S BOWLING TROPHIES. RAPTOR'S FLYING SAW BLADE HAS BEEN SLICING A LITTLE WILD LATELY.

DARKETALKERS"

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1996: Next Generation's

What does the future have in store for gamers? Time to put our reputation on the line...

Sega will increasingly fall back on what it albeit capriciously - does best. and that is break new videogaming ground

game forecast

n trying to forecast the game Industry's future, Next Generation has regularly gone out on a limb. So far, at least, we've largely been right. We predicted the demise of 3DO's multiplayer, the 32-bit dominance of PlayStation, the rallying of Saturn, the death of Atari, the delay of Nintendo 64, all while other magazines were fumbling for the snooze button. And now, we offer our humble thoughts as to what will transpire throughout the rest of the year, 1996.

The big news is, of course, Nintendo 64, which will launch on September 30. Bundled with one joypad, the unit will retail for \$249 and sell like hot cakes. Unless, of course, Nintendo's legendary manufacturing problems (which, in all probability, were just an excuse to mask software delays) prevent the production of

enough units. But this is extremely unlikely Gamers should however. expect no more than four or five games available at launch. Nintendo will be extra careful to control inventory levels of these high-cost cartridges, and the company will also be keen to grab all the early adopters' software expenditure for itself (and its most highly favored partners). Nintendo 64 will not overtake PlayStation until sometime in 1997, but overtake it will,



respond to the considerable threat of Nintendo with a price drop to \$199. Sony will look to Sega to make the price cutting initiative, and then match the move. With a higher percentage of Sega's own titles making up Saturn's "must-have" game list, reduced manufacturing costs as a result of the introduction of the "white" Saturn, and, of course, the need to catch up

with PlayStation, Sega will be the more aggressive of the 32-bit vendors. Tagging along behind, Sony Computer Entertainment of America will continue to have a hard time convincing its Japanese parent that losing money on hardware sales is a smart idea, but convincing it will

have to he Gamers can also look to Sega to fight the battle ahead with innovative enflware on











early predictions





Designed for



Microsoft Window§95



its weapon of choice. Whereas Sony's initiative will center more around doing more of the same style games, only bigger, faster, and with 1996 updates (and there's nothing necessarily wrong with this). Sega will increasingly fall back on what it - albeit capriciously, does best - and that is make break new videogaming ground.

Having exhausted the back-catalog of big name arcade conversions (Fighting Vipers is the only exception), Sega will live or die on the success or failure of such

diverse offerings as 3D Sonic (Sega's direct challenge to Super Mario 64), Nights (the 32-bit brainchild of Yuli Naka, the creator of the original Sonic The Hedgehog), 10-player Bomberman (vup. Hurlage Soft should have code completed this summer) and Heart of Darkness (see page 17).

Next Generation expects the best PlayStation games to surpass Saturn's finest in terms of graphics sophistication (we don't expect PlayStation to lose its perception as the "best" 32-bit system). But, a slew of rushed-to-market, cookie-cutter PlayStation releases will dilute the mix. (If a two-bit company is going to churn out just one "next-generation" title, it will be on the Sony platform.)

Expect PlayStation, however, to remain ahead of Saturn in terms sales figures. The gap will narrow, especially after the launch of N64, when PlayStation's trump card - simply being the most powerful game system money can buy - is snatched from its grasp. At this point, the war will be fought more on what games are available for what systems, and this is where Sega's exclusive arcade titles will yield dividends.

On the PC side, 1996 will be remembered as the year of the war that wasn't. In 1995, pundits were predicting a mass of graphics

Activision not EA In NG 17, a preview of

Time Commando was attributed to EA as the game's publisher. EA is, in fact, the game's publisher in England, but not in the United States, Activision is the US publisher of Time Commando





be the most mind-blowing game of the '90e will be HudsonSoft'e 10-player Bombermen (left), Nintendo's see in the hole, Super Merio 64 accelerator cards battling it out for market dominance. Indeed, this will still be the case (there were more than 20 different cards out there, last time we checked). But with the introduction of Windows 95's Direct3D API (all cards will work with all games

- at least, that's the theory), there's a good chance that gamers won't notice it. The war will be fought on system power, price, marketing, and (perhaps most significantly) distribution muscle. Not the userunfriendly mire of complicated compatibility alliances and "killer app"

software products (that don't work on any system other than the one it was specifically designed for) that the pundits had feared. And this is good news. The year 1996 will also see the PC start to

pull away from the game machines in terms of raw polygon-pushing power, and as a result of the introduction of online

gaming. Mpath, TEN (Total Entertainment Network), and Catapult are all planning to bring an online game service to market later this year. While the potential exists for some compelling gameplay, Next Generation predicts that it will be 1997 before these services fulfill their potential. Utility will be stunted by system crashes, erratic performance, and more subjectively - the realization that playing an anonymous gamer 1,000 miles away is not the same as having four buddles gathered around a conventional multiplayer game. Nevertheless, the seeds will be sown.

M2? Forget it. It's not going to happen this year. Instead, gamers will increasingly look to the arcades for high-tech thrills. Virtua Fighter 3 alone will spark a renewed interest in arcade gaming, with Namon's answer to Yu Suzuki's masterpiece guaranteed to add fuel to the flames. Meanwhile, most homesystem gamers can look forward to far too many "And-this-time-he's-in-3D!" 32-bit reworkings of successful 16-bit franchises - and we're prepared to bet that all of them fall between Jumping Flash! and Super Mario 64. Electronic Arts will rise again (it has no choice). A new form of Sonic the Hedgehog will rise like a phoenix from the 16-bit ashes.

And last, Next Generation will be here in prompt form to tell you all about it. Thanks for reading,

1996 will also see the PC start to pull away from the game machines in terms of raw polygonpushing power



the red-hot Sega erco lee to be con the 32-bit Seture

() () () () () ()

OLD SOLDIERS NEVER DIE, THEY JUST TURN INTO

BLOODTHIRST

MUTANT ZOMBIE

You blasted your way through an onslaught of undead marines and

hell-spawned hordes in Doom, Ultimate Doom and

Doom II. Now you can KK retire, right? Wrong.

Seems flesh-eating mutants have the mortality rate

of a cockroach and are alive and kicking in Final

Doom - the last of the XI legendary Doom products. It's two new 32-level episodes complete with

new stories (Evilution & The Plutonia Experiment), new frighteningly realistic graphics and new pulsekex

nem pounding music. It's time to finish what you started.

5.56

DOOM

http://www.gtinteractive.com



GT Interactive Softwa.

End of story

Sega creates

Sega opens the doors of its sevenstory theme park in London, UK

alternate reality

illed as the world's largest "futuractive" indoor theme park, SegaWorld, situated in London's Trocadero center, is scheduled for an August opening.

The park, which cost \$7D million to develop, takes up seven floors of Piccadilly Circus's entertainment complex and will have a capacity of

around 3.DDD visitors at a time. The entry price has not yet been finalized, but

Sega is internally discussing whether it should charge \$15 or \$24 per person.

SegaWorld features six main rides dispersed over six themed zones - Sports Arena, Flight Deck, Race Track, The Carnival, Sega Kids, and Combat Zone. The rides, which cost Sega around \$1 billion to research and develop, all have interactive elements which means, as Sega asserts, "each visitor will have a totally unique experience and no two visits to the attraction will ever be the same."

Two of the rider - Beset in Darkness and Agua Planet - are totally unique to SegaWorld. The first is a kind of shost train ride, but with unspecified interactive elements, and the second is a "motion-based 3D undersea experience" which, apparently, is so realistic that test iders held their breath, thinking they were genuinely in water.

Dn Aqua Planet, as with another of the six rides, Space Mission, visitors wear a Mega Visor Display (MVD). onto which a virtual reality image is projected. Sega claims that, "On a moving ride linked to the projected images, the visitor can

interact with the Images, feeling totally immersed in the surrounding." Effectively this means that, when looking left, the MVD presents the scenery as such, as is the case when looking up. Furthermore, when participants look down, they will see their clothes transformed into a space suit or diving costume - depending, of



architecturel design of SegeWorld, in all its full, rerish, metallic sloty

course, on the ride they're in. The last three rides are Ghost Hunt (a sit-in taxi ride in which passengers can use laser guns to fire at ghosts on a 3D screen), Mad Bazooka (a bumper car, where each car is equipped with a ball-firing bazooka and scores are given on hits for and against), and Sega's AS1. Simulator, Various top-end Sega arcade machines will also be placed around each zone, but for now Sega hasn't revealed any specifics.

Each visit to SegaWorld will take about four hours, though visitors are welcome to stay longer. The park layout is anticlockwise and spiral. Visitors start by being transported to the top floor in a "rocket escalator," then go down floor by floor. And, a Sega retail outlet will be on location

Sega hopes each ride's blend of motion simulation, virtual reality, and "the latest in computer graphics" will go toward attracting at least 1.75 million visitors in its first year. Furthermore, with an eye on longevity, the company stresses that each ride will be regularly updated and that a major attraction will be added every year.

The rides

cost Sega

develop

\$1 billion to

research and

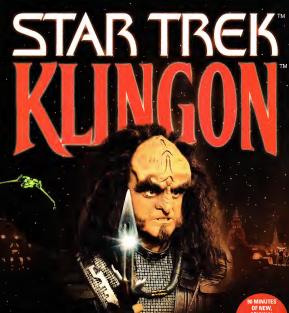






Sega FECs Sega plans on building centers (FECs) all across the US, and has installed

many already. The newest is Sega's Meridian in Seattle. For more information about SegaWorld, there is a web site at http://www. segaworld.com, which carries press releases and a small description of each ride.









ORIGINAL STAR TREK™ FOOTAGE! A 3-CD ROM Set

THE ULTIMATE INTERACTIVE ADVENTURE INTRODUCING RADICAL NEW FULL MOTION EDGE-TO-EDGE VIDEO
INSIGHT JONATHAN FRAKEY^{NE KONA}K" COMMANDER WILLIAM T. BIKER "NAK HIBERSHENESTAB TREK' THE NEXT GENERATION"

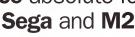
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LEARN OR DIE!

Divorce absolute for The 64-bit

partnership that never officially was, has ended







Whispers of Sega's interest in the technology were circulating before Matsushita secured the license to produce an M2-based game

machine from a beleaguered 3D0 company last year for \$100 million. However, when Matsushita took over, more focused rumors sprang up

to the effect that the electronics glant was holding talks with Sega with a view to licensing on the M2 technology. Both companies have consistently denied ongoing



rumors of a possible collaboration, but Sega took consignment of an M2 prototype for analysis early this year - giving weight to continued speculation.

There are two reasons why the covert talks collapsed, First of all, Next Generation has learned that Sega wanted to be the sole M2 brand, which would have contravened Matsushita's hones of setting up M2 as a standard with several other hardware companies on board. Second, although Sega technicians were reportedly impressed with M2, they were not



ne around a con is. But there just isn't hing here that hesn't

sufficiently awestruck to warrant its immediate Implementation into their plans. Meanwhile. The 3D0 Company's own software development for M2 goes ahead at pace, despite some initial difficulties. A source close to the M2 project told Next Generation.

*To begin with, Studio 3DO developers found M2's workstation-like architecture tough to deal with in terms of maximizing performance," It is known, however, that one of the more able developers, working in conjunction with the internal graphics experts, has designed a low-level 3D

engine specifically for M2. Next Generation's source was full of praise for this new engine, which is being used in an as of yet unnamed driving game. "You've got to see it to believe it." the source said, "It's as big a leap in graphics performance from the 32-bit games as you could imagine. All I can say about M2 is that, for once, a machine may actually live up to its hype."

3D0 has also teamed up with Cirrus Logic, a leading manufacturer of advanced integrated circuits, to

develop a 3D accelerator for the PC. 3D0 is contributing its M2 3D engine and Cirrus Logic is bringing its video graphics controller technology to the project. The accelerator is designed to be compatible with 3D games written for Microsoft's Direct 3D, and is expected to surface for this

winter holiday season. The 3D graphics acceleration card market is becoming a little crowded lately, but the 3DO/Cirrus effort will benefit greatly from the inclusion of 3D0's 64-bit technology. M2's 3D engine is capable of processing 500,000 polygons per second and the rendering engine generates more than 100 million pixels per second, resulting in a greater resolution than 640x480.

Add this to the flexibility of Windows 95's Direct3D API and PC graphics will really cook.

Saturn's Heart of Darkness

In preparation for this fall's battle with Nintendo 64, Sega has secured the rights to release Heart of Darkness, one of 1995's most anticipated (and delayed) titles on Saturn this fall, before it appears on the PC. This visually stunning game was first previewed back in NG 6 and is being developed by the French outfit

Amazine Studios. The game follows the adventures of a boy and his dog, Such is the quality of the Imagery that the main character alone draws on a pool of 1,600 frames of direction (most cartridge names can handle a total of 1,200). It also features a full 27 minutes of

















he only running demo of M2's technology is this poor-quality QuickTime movie doing the rounds on the inte the image quality is dire, it is still possible to recognize some of M2's oblitties — a video sequ polygon, which bends end morphs into a torus. Unfortunetely, in the finel enelysis, the entire sequence fells to impress

New software prolific at **PlayStation** Expo Sony plays host

to vet another dedicated software event

Nintendo's

After years of speculation

Generation can confirm

follow-up to its highly

32-bit, color-screen

outfit in Cambridge,

Project Atlantis

ources close to

Nintendo, Next

England, is codenamed

Generation has learned

that the machine will

release in at least one

end. Project Atlantis

features a low canacity

chip which will run the 3 by 2-inch color screen

machine for up to 30

hours. Our sources claim

that the machine will not

be compatible with any

other hardware currentl

available on the market. It

isn't beyond the realms of

possibility, however, that

Project Atlantis is a spin-

disappointing Virtual Boy.

This could be seen as a

off of Nintendo's

territory before the year's

that Nintendo is making

preparations to unveil the

successful GameBoy. The

machine, developed by a

research and development

Having spoken with

new color

handheld

and rumor, Next

his year's PlayStation Exposition, which showcased an impressive 229 games from 78 exhibitors, took place in Harumi in the

center of Tokyo The event's highlight was a private presentation - only 50 show attendees were invited. including Next Generation - of EO. the new game from D creators, Warp, Weighing in on four CDs, the title is an expansion on the D theme, with a number of beautifully conceived, prerendered sequences but also more graphics generated on the fly. Due to ship in the summer, EO already has Japanese lournalists in a frenzy, but, despite the marked improvements over its predecessor, it's unlikely to generate the same levels of excitement when it arrives in the West.

Sony's naturally enormous presence at the show manifested in a huge booth separated into two parts, one demonstrating Sony-brand titles. the other debuting products developed outside of Japan under the new "Yoge" label (including British games Wipeout and Destruction Derhy)

Seemingly running short of ideas. Sony presented Jumping Flash 2 and Motor Toon GP 2, both attracting a lot of attention despite their lack of originality. Sony's only original game of note was Popolociois, another example of the growing band of role-playing games to hit the PlayStation.

Sequels seemed the order of the day all round, in fact, Zoom showed an early version of Zero Divide 2, while Namco naturally unveiled Tekken 2 and Genki presented the bizarrely titled Beltogger 9, a follow-up to the Kileak The Blood series. Continuing in the Doom-style template, its gameplay is significantly more accessible than the original's while its graphics retain Klleak's dark feel but with a greater level of complexity.

A surprise Expo hit was Digital Mission VFX from Bandai. Although its crowd-drawing potential was no doubt bolstered by its origins (the game is based on popular anime series

"Macross"), it proved an entertaining title in its own right. SNK's PlayStation conversions of

Samural Spirits and King Of Fighters '95 affirmed the company's beat 'em up inclinations, and fans of were also





treated to

ro's EO was one title heavily byped at the PS-X Expo (top). Takara's Choro Q (right)

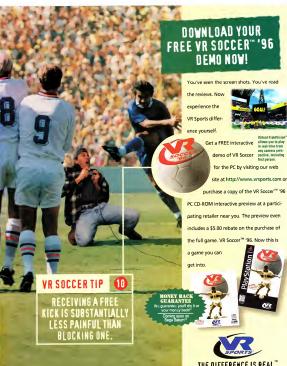
Capcom's Vampire: Night Warriors. The Street Flahter creator's other big 32-bit title. Resident Evil. was demonstrated to the accompaniment of a troupe of zombies and proved ample vindication of the company's change of direction after countless 2D fighters.

Among the numerous small-fry developers clogging up the exhibitions' two halls, other notables could be found in the form of Takara showing Choro Q. Banpresto (with Megatudo), and Konami (with a Snatcher)

PlayStation Expo '96 was a telling event, illustrating that the 32-bit software scene is becoming as stifled with average titles as the 16-bit equivalent was before it. It also demonstrated Sony's own problems: in the 16 months since the machine's launch, its in-house development facility has yet to bear one single triple-A grade product, leaving the likes of Namco to carry the flag for the format in the foreseeable future.



way to recoup some of Nintendo's heavy research and development costs. Development tools have been sent out to selected game developers. all of which are under strict nondisclosure agreements









movers & shakers

A monthly look at business news affecting the gaming world

by Chris Sherman

BMG COMES OUT KICKING

N E W S L I N E : Videogame publisher BMG Interactive is getting into the ever-expanding sports videogame market. To kick off the brand, BMG signed a strategic licensing agreement with Major League Soccer, the new U.S. professional outdoor league, Division 1, that commenced play in April. The first MLS title is expected to reach retail shelves in spring of 1997 and is expected to launch on PlayStation, Saturn, and PC CD-ROM.

B O T T O M L I N E : While the category has seen a number of newcomers in recent months, BMG

appears to have compiled a competitive team. The company's dedicated sports brand will be under the direction of Don Traeger, former cofounder of EA Sports, Z-AXIS. which contributed to the

As port of the crea m of John Medder Football, Z-AXIS lole

John Madden Football line. BMG's eew sports liee is the development partner in the deal. And BMG Interactive President Jay Moses

is himself a former producer at ABC Sports. NATO'S GOT ZIP ON THESE GILYS

N E W S L I N E : Videogaming startup Zipper Interactive, Inc. recently signed a strategic alliance with Viacom New Media to develop games for Viacom.

BOTTOMLINE: Keep an eve on these guys. Zipper has been quietly toiling away since June 1995 and the deal with Viacom is valued at more than \$1. million. Zipper is presently working on Death Drome (Windows 9S, PlayStation), an action arcade game for winter '96 release, Zipper, founded by Jim Bosler and Brian Soderberg, was created to design and develop 3D realtime action games.

All of the company's titles are expected to use Its Game Z 3D engine, realtime battle sim software used by the U.S. military and NATO.

DID SOMEDNE SAY DILINE GAMING?

N E W S L I N E : Engage Inc., wholly owned by Interplay Productions, has surfaced to take its stake in the emerging online multiplayer gaming market.

BOTTOM LINE: Here is another one to keep an eye on. Interplay may own this baby right now but company executives know a hot market when they see it. In the next several months (perhaps by the time you read this) Engage will be an independent company, with other investors. Why? Venture capitalists and other types are foaming at the mouth when they hear of the online gaming prospects. Besides, Engage will have a better chance at getting other game partners to come aboard when it is not wholly owned by Interplay.

ANOTHER EA GRADUATE GOES OUT ON HIS OWN

N E W S L I N E : Startup AnyRiver Entertainment is attempting to carve out its niche in the crowded gaming Industry, with five titles currently under development. AnyRiver will focus on developing PC CD-ROM and next-seneration titles in the action and adventure genres.

BOTTOM LINE: Electronic Arts graduates are turning up faster than Microsoft graduates. forming their own gaming companies. AnyRiver is founded by former Electronic Arts executive Stewart Bonn and investors include Kleiner Perkins Caufield & Byers. Nothing to sneeze at. The startup has already signed a number of partnerships for title development including: PostLinear Entertainment and Trippet Studios, the special effects house that worked on films such as Iurassic Park and RoboCon. Also on the menu is a fantasy action game being developed in collaboration with Advance Reality.

INDUSTRY ACQUISITIONS CONTINUE

N E W S L I N E : Maxis, Inc., developer of SimCity and other simplemes, has signed a definitive agreement to acquire Cinematronics, a developer of action and arcade titles.

BOTTOM LINE: As new companies burst onto the scene others get snapped up. Upon completion of this deal, the acquisition will result in a one-time charge of up to \$2.3 million to Maxis' operating results. The two companies aren't strangers to one another Cinematronics developed Full Tilt! Pinball (NG 1S) for Maxis and It "marked Maxis' debut into the action category."



Christopher V. Sherman is the publisher of MMWIRE, the leading daily news service on the business of interactive entertainment. MMWIRE ON! INE can be found at http://www.mrrwire.com. Email him at multimediawired



ELECTRONIC ARTS TUDIOS

Rets leaving a sleking ship? EA's woes show ec sign of ebatieg as key staff leeve to purs



ts bigger eed e s

DEATH.

It's what they live for.



Against a dark and shifting 3-D landscape, the warriors of the twisted underworld known as BATTLE ARENA TOSHINDEN 2™ await your return. How do they know you'll be back? Let's just say it's a gut feeling. As in the

first 360° go-round, the moves are lethal, the stages visceral and the characters, wicked. And this time, the original swengers are joined by a new crew of fighters. Like Tracy, the sexy cop gone bad/Verm, merciless madman; and Chaos, a friendly fella who happens to swing a sickle. All of 'em real keen to get to know you better. On every level.

So welcome back. And plan to stay awhile. Because here in

Battle Arena Toshinden 2, these forsaken foes aren't just out to take you down. They're down to take you out.





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JOYRIDING

The latest developments in online gaming



The big boys, like your local Baby Bell and AT&T, know that online is where it's at. Sound and animation is now possible on the Web through Netscape plug-ins like Shockwave and RealAudio (though trying it on anything less than an ISDN line is an exercise in Zen). Problem is, these big companies aren't sure what they should be doing. AT&T folded its online service in favor of an open Web model, and its plans for online gaming went out with the bathwater.

Not only did those plans include games on Interchange (the SSI AD&D Darksun engine was rumored to appear on Interchange, which would have made it the most sophisticated multiplayer RPG online), but they also apparently included the Imag Nation Network (INN). INN has a very tight relationship with Sierra (which was the original creator of INN, and was purchased by CUC, a mail-order retailer) which seems to be reenergized with a few new excellent games, Earthsiege 2 and the upcoming Red Baron II (NG 17) that look well suited for some sort of multiplayer online play.

Other gaming services on the commercial providers are gearing up, too. Now that GE Information Services has washed its hands of Genie, expect the games on that service (Air Warrior, Cyberstrike, multiplayer BattleTech) to leave like rats off a sinking ship. Some of these offerings will almost certainly appear on AOL, but Genle, a service with a big online game component, and an idea which was ahead of its time, may be a part of history. Time will tell.

More impressive still are the Mpath and Total Entertainment Network (TEN) folks, who have managed to generate oute a bit of buzz regarding their networks (even though neither network is up at the time of this writing). And DWANGO, which is now online, is stuck fighting shadows until these two new services are open. TEN is the closest to coming online to the general public. It showed off the service at the Computer Game Developers' Conference with Duke Nukem 3D over the Internet, through a local Internet Service Provider, to a game server in Michigan with an offthe-shelf 14.4 K-bits-per-second modem. And it all worked just fine.

TEN has a few alliances that should prove interesting with a big cash infusion and content from folks like Apogee (Duke Nukem 3D has many fans) and Spectrum Holobyte

The heavy-hitters of the game world are entering the online gaming market with full-blown multiplayer games designed to support hundreds of gamers at once

(who pioneered LAN gaming with the venerable classic Falcon 3.0), TEN entered a full beta test with its online service this spring, and as soon as I experience more, you'll be sure to hear all about it. Mpath is a bit further out,

but it has plans to launch its own service for Internet-based gaming this year. The benefits? Despite being a WWW-based service, Mpath claims that it has solved the latency problem - the single biggest barrier to playing fast-action arcade games over a telephone line - and that it will support real chat through speech (thus opening a market for voice alteration software, enabling men to sound like women, and vice versa).



Bernard Yee has contributed to USA Today and writes regularly for PC Gamer, PC Magazine, and has authored several books on gaming by Bernard Yee

One major reason Moath is so confident is that it has entered into a strategic alliance with PSINet, the owner of Pipeline and Interramp (an ISDN-accessible ISP), and therefore the owner of a big, fat data pipe (called a backbone, for obvious reasons) on the Net. If you're a Pipeline or Interramp subscriber and Mpath is on that data pipeline, you won't have to go through any odd routes that non-Pipeline subscribers might require. In a nutshell, to enjoy the maximum low latency Mpath claims to offer, you'll have to switch ISPs to one of the PSI services, which

What may be the most exciting development, however, is the heavy-hitters of the game world, who are entering the online gaming market with full-blown multiplayer games designed to support hundreds of gamers at once. An example of this is Origin Systems' Multima, which has has just entered preliminary alpha testing. And just in case you've been gaming under a mossy rock for the last 15 years. Ultima is one of the most successful computer RPGs ever.

is a convenient setup.

Multima is an Internet-based multiplayer online version of Ultima, and the initial alpha claims to have more than 3,000 participants, with the client software providing a complete environment on each gamer's machine. Origin claims that you'll be able to enjoy state-of-the-art graphics, and oustomize your avatar (your online alter-ego) with gender, hair color, and clothing. This online universe was designed to be self-perpetuating; a simulated resource system enables the game to manage itself so that it can generate quests, conversations, NPCs and monsters, all on its own, Multima will be Windows 95 native, another good reason to upgrade.

So while the time for online gaming's not quite here yet, it's coming real soon. And gaming might not be the same again.



There is a place where mercy is not welcome.



THE DROME OPENS SUMMER '96. AVAILABLE ON MS-DOS*/WINDOWS*95 CD-ROM.



ACTIVISION









Arcadia

All the latest coin-op and arcade news



Marcus Webb is the editor-in-chief of RePlay magazine, the US' leading trade amusement magazine

by Marcus Webb



Capcom hopes Star Gladlators will keep gamera happy 'til Street Fighter 3



Time Warner Interacti is now part of the has accessful WMS amp

WMS acquires Time

Warner/Atari Games
Shaleced sand consolidation rocks onl
The Chicago jugigranut known as
WMS, line, has swallowed up another
former competitor. Atan Games Corp.
(Time Warner Interactive). WMS is the
parent of Williams, Bally-Midway and is
the creator of Mortal Kombet, Killer
Instinct, and War Goos, among other
popular videogames.

The purchase was completed March 29. Atari is an indirect, wholly owned, subsidiary of Time Warner Inc. Reliable sources put the buying price around \$25 million. WMS executives said Atari will remain in the Milpitas. CA factory site and will be run as a separate division under the WMS umbrella. Atari's sales, marketing, and engineering people are reportedly going to be asked to stay on. WMS executives said they would send some of their seasoned engineers to visit Atari, with a view toward helping the company become better organized and more competitive. We'll see if the WMS magic rubs off!

Japan previews more games at AOU

The springtime trade show in Japan Arcade Operators' Union (AOU) was chock-full of advanced videogame graphics, as well as games that

weren't shown at the American Coin Machine Exposition (ACME). Namoc showed Prop Cycle (previewed on page 95), an Alpine Racer-style simulator where players podal blcycle-type foot pedals and use a stering wheel to navigate an on-screen paraglider, bursting nearby balloons as they swoop through the air, Jaleco showed Super 67

24 Hours, a driving simulator in a

two-player sti-down cabinet. It uses Sega's Model 2 platform under license Up to four players can play in two linked units, and a dedicated oneplayer version may also be offered. Gameplay features two different courses (easy and hard), but you can drive each course in two directions. Jaicco also showed a redemption shooting rowelty called Spice. Fighter where you are mabber balls at all lem imaders. Segia showed Decishibet for the Titan system and a compact version of Virtual On-Copport showed Star (Subdistion, Institute) relevants to the Annal On-Copport spice Star (Subdistion, Institute) relevants pattern with compacting publics the late to be Sony/Namor Pellysbation pattern and the pattern of the Star (Subsequent S

Sega Model 2 technology licensed to Data East, Jaleco, and Tecmo

It's a sure sign the leaders in the technology race have lapped the field when the start I leaders in the technology race have lapped the field when the start I leaders is the start is to be the start is the start

In the meantime, Segar's current Model 2 board (which supported megah tisk like Daytons (25 Asia Mi Virus Afghrer 2 has been licensed to three other Japanese videogime factories: Jaleco. Data East, and Tecno. The strategy behind this is samitar is concept to when RCA developed sooir IV and licensed the technology to its competitors. It is better for the technology leads to burg the endine competitions with the street for the technology leads to burg the endine development is monopolitically to only one or two companies, a general development is monopolitically only none or two companies, a general development is monopolitically may hamper the trade's development.

All three floorsees now have Model 2 games in development: Super GT 24 Hours at Jaleou (shown in two-player cockpit format at the February ADU Expo in Japan); Air Walkers (a basketball game) at Dhat East; and Dead or Alive at Teemo (the latter was previewed at the recent ACME Show). Data East says it's also developing its own hieteh computer regarbles system, by the way.

3Dfx: impressive

Why are companies like Jaleoo, Tecmo, and Data East hoensing videogame technology from such as Sega these days? Because R&D at this "Star Wars" level is just getting too damed expensive, that's why, You're golden, much more of this kind of business in the future and a new Mountain View, 26 A company called 3Dfx Interactive will probably yet a buge share of it.

During the ACMS Since, our gree popped at its display of system complements and design tools intended to make it possible to create and sets thut it was active games (with texture control to the control to the control to the control to the whole nies yearly for the con and home markets alike. Products and systems go under names like "Ossidan" and "Moodo Graphos and Schoelerack" his his point is 3DN requires althoughouting results until at a time, rather than anisating on costly (creating frees. It will make its money by expending the number of players and locations that can handle three advanced games on the cone format. The minimum terms of the control to the control to make the control to the control to make the control to the control to make the control to ma



Namco continaca il arcada experiment with Prop Cycle



Generator

As CPUs begin to incorporate more specialized chip functions, will the dedicated graphics processor be assimilated as well?



by George Zachary

n the world of gaming, most people believe that sophisticated gameplay and realistic graphics sell each new generation of software. In the world of semiconductor chips, most people believe that Moore's Law (performance doubles every 18 months) sells each new generation of hardware. Since chips perform the computat that act as the bedrock for gameplay and graphics, one can see that "better" chips probably means "better" games, especially given the horsepower-hungry computations necessary for the kind of graphic realism consumers demand. This leads to the current debate among hardware designers over whether current and future Pentium MXX processors can do the job alone, or will they continue to require graphics adaptors, and where in the computer's architecture the next generation of adaptors will reside. In my view, the CPU can't do it alone,

In terms of the game logic, running routines on the CPU is the wise choice, especially since there is a stream of general-purpose CPU performance improvements coming that

In terms of the game

on the CPU is the wise choice, especially

since there is a stream

improvements coming that is perfect for

of general-purpose **CPU** performance

game logic

is perfect for game logic. When it comes to multimedia and graphics routines, however, you have a choice between either writing software routines to the CPU, or adding some form of specialty hardware. Application end graphics tines, on the other hand, have such etely different instruction set behaviors that working from softwere quickly clogs a CPU's pipeline. On workstations, this is solved by adding an extra chip: a custom 3D graphics ASIC (application-specific integrated circuit).
This chip enables the CPU to go on its merry way, computing the overall logic of the simulation, while the ASIC performs the polygon and pixel operations. The

VSA adaptor in your PG at home performs much the same function when you move screens around in Windows — the adaptor handles moving the pixels, while the CPU is free to run the application.

But when looking at semiconductor history, it's evident that this kind of functionality passes through a process involving the underlying chips themselves. First, functions like polygon operations show up as custom ASICs. Then the function is taken over by more general-purpose digital signal processors [DSPs] surrounded by custom gates. Functions then become built into the CPU with some off-chip custom gates. Finally, everything runs in the CPU except for any remaining analog functions. As CPUs become faster and ce handle more functions, the CPU becomes a black hole pulling in functionality from across the motherboard, and wins this functionality tug-of-war when it can accomplish the task "good enough." This is what happened to the floating-point co processor chip market. This once prosperous market has been consumed by CPU glants because floating point functionality. was generic, necessary for a wide range of applications, and was neatly integrated into the microproces:

routines. The market for hard-wired MPEG-only PC chips is drying up as intel's CPU starts to absorb more of the

functionality. Even modern functions, sound synthesis, and 30 graphics functionality are now edging closer to the CPU black hole. But they won't be consumed for a fundamental reason: One of the instruction set areas that multimedia requires is with multiply/add instructions, which makes up the basic staple of 3D polygon processing, MPEG intra-frame processing, and, not coincidentally, modem functions and sound synthesis. Until recently, this was the sole province of off-CPU accelerators. CPU manufacturers are trying to change this by offering basic multiply/add instructions as CPU enhancements, and, to an extent, this will result in more 3D polygons per second and more MPEG frames per second

It won't begin to approach, however, the levels necessary for the high quality images which drive general consumer demand, especially in the game market, where the main attraction to buying the latest software is because it looks "way cooler." This is especially true when you consider that multimedia itself, much less a CPU-based approximation, hasn't even reached the "good enough" point yet -- that

won't happen until multimedia looks the same on screen as it does in the physical logic, running routines

These higher quality images rely on complex pixel processing hardware which won't appear on CPUs. The reason for this is that pixel processing hardware needs a dedicated, multistage hardware realing, and a CPU is the worst.

totally weeks a stream, reads a stockard, nutritate, however, and the stream of the st accelerator to order on the moureboard to exempliment the Intel Pentium MMX. Expect one or two multimedia chips to survive by offering low prices (less than \$150), broad multimedia functionality (including modern and sound functions, since they share instruction sets that are similar to

tractions, since they share instruction sets that are similar to pixel processing), and the support of the next mega-hit game. In 20 yeers, CPUs may boast the raw speed to handle all pixel processing on its own. But by then we'll have moved from 20 pixel processing to 3D voxel processing, and the debate will rage over ways to accelerate those operations

George Zachary, who, when working with Silicon Grap interviewed in NG 14, is now a partner at Mohr Davidow Vents emnii to him at gzachary@ mdv.com

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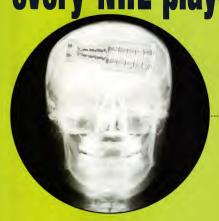
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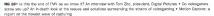


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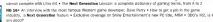
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Will DVD change the face of videogames?



Digital Video Disc (a.k.a. DVD) is the next big thing. Each disc holds seven times as much data as a CD-ROM, and they're coming to the game industry faster than you can say "73 hours of full-motion video.

So do gamers really

so excited by it?

need DVD? And if they

don't, why is everyone

chnology will always evolve.

and data storage technology is no exception, in 1996, jest as worldwelf-standard in the world is onlyging a worldwide 'standard' in the lapse of compact discs (nobody mention Nitrostrolo, those with an eye to the future are talking about CD's accessor, Digital Video Disc (DVD). DVDs are small aliker

(nobody mention Nincendo), those with an eye to the future are talking about CD's successor, Digital Video Disc (DVD), DVDs are small silver discs; the same size as CDs, but are capable of holding seven times more data, and — perhaps more importantly — capable of reading that data from the disk up to 30 times quickler.

This is a big deal because many experts believe that DVD technology will be the key to finally realizing a dream that those in the consumer electronics business have cherished for a long time: that of the all-in-one, sits-on-topof-the-TV."little black box" that does everything. The dream is that this "little black box" will replace a home's VCR, cable box, game machine, PC, telephone, answering machine, and probably a lot more besides, all in one. CDs just aren't up to the job (we all know what video played off a CD is like - and besides, CDs aren't recordable). DVD, however, is up to the job, and while this mythical "little black box" may still be just a glint in some Japanese engineer's eye, what is certain is that DVD is destined to slowly but surely replace CDs in all applications, and that ore the end of 1996 there will be DVD-based products in US stores. DVD movies are destined to replace videocassettes. DVD music discs are



Games like 11th Hour mey no longer arrive on four CDs. But who reelly weats more FMV in their games?

DVD: the specs

The following specifications make up the current standard for DVD, as agreed by all major electronics manufacturers.

Disc Diameter: 120 mm (5 inches) Disc Thickness: 1.2 mm (0.6 mm x 2) Memory Capacity: 4.7 gigabytes Track Pitch: 0.74 micrometer Laser Diode Wavelength: 650/635 nm Error Correction: RS-PC (Reed Solomon Product Code) Signal Modulation: 8-16 Data Transfer Rate: 4.69 Mbit/second average for image and sound Image Compression: MPEG2 Audio: Dolby AC3 (5.1 ch), LCPM for NTSC and MPEG Audio 5.1 channel and 7.1 channel, LCPM for PAL/SECAM (A maximum of eight audio channels and 32 subtitle channels can be stored) Running Time (movies): 133 minutes per side including three audio

channels and four subtitle channels

File Management Structure: Micro UDF and ISO-9660



3DO le in ongoing negotietions with Matseshite to make DVD mechines with the M2 chin inside

destined to replace conventional CDs, and — you guested it — DVD-ROMs are destined to replace CD-ROMs, and that means (dear game player) that they're coming your way.

So where did DVD come from? How does it all work? And just what time frame are we talking about anyway? It's time to take a look at the origins of this new technology, and then a look at what game players can expect from it.

DVDs are capable of holding seven times more data than CDs, and are capable of reading that data up to 30 times quicker

DVD's origins are complicated, and

the forms has Sone fraught with difficulties time its consequent advanced with any new mass-market forms. The reward to a mean market forms the reward to a mean fraught forms the reward to a mean fraught forms of the property of the importance of a surform standard. The group of developers threatened that they group of other the importance of a surform standard. The group of developers threatened that they group of other property of the importance of a surform standard. The group of developers threatened that they would not support any formst unless there

was a uniform standard [NG 11]. The two rival camps laid down their guns and released a somewhat vague, uniform specification for DV/D with which each said it was happy. So a VHS versus Betamaxsyle format war would seem to have been averted at least for now.

The first DVD-based machines to arrive in the home will be noninteractive DVD movie players, which are expected to ship this fall. These machines will be capable of playing 133 minutes of MPEG2 (higher than broadcast quality) video and three channel audio with four subtitle channels on most TVs.

The DVD movie players are expected to the the market for around \$500, and we're took that the studios in Hollywood are very excelled about their arrival. As a revery excelled about their arrival. As a revery excelled about their arrival. As a revery excelled and their excellent excelle

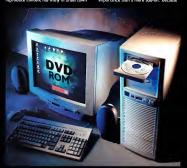
quite worried. Hollywood is naturally concerned when perfect copies of movies can be made at home with simply a DVD player, a DVD-R unit, a blank disc, and the press of a button.

Similar pressure from creative content providers in the past has led to other digital-recording technologies (such as DAT and Sony MiniDisc) being hampered by blank discs or tapes costing as much as prerecorded ones. Let's hope a similar move doesn't hamper DVD-R's progress to the home environment.

Next will come the first Interactive DVD-ROM drives for the PC market. These could possibly arrive as early as later this year.

To incorporate a DVD-ROM drive within a conventional PC set-up, however, users will have to spend some money. In addition to the new DVD drive itself (\$300 to \$400), users will have to add MPEG2 and AC3 (six-channel surround sound) decoders, plus 150 MHz Pentium CPUs (all of which will cost hundreds of dollars).

This has led some of the folks in the hardware development camps to consider treating the arrival of DVD with far more importance than a mere add-on. Because



The PC DVD set-up is essentially the same as with CD-ROMs, with a few minor exceptions. Your new PC set-up will need a massive apprade in processing enything less than a Pentium won't do mach good

What the DVD numbers mean

o far, the only DVD spec that has been released is one general and vague outline for both the DVD movie player and DVD-RDM drive (p. 37). This spec was agreed upon by

and DU-DEMM drive (p. 27).

The two competing camps, Philips/Sony and
Time Warner/TolshinAbstaukhts, after
software developers demanded a uniform
standard (Ne11). Many believe that in order
for DVD to action on, all drives and players
must be cross-compatible from the very
beginning, without exception. That would so
include backward compatibility from CDROMs to DVD-ROMs (your new player must be
able to play you codd dires).

able to play your oil discs.)

Although it is convenient versus the spec

Although it is convenient versus the spec

technologies of DVD, its 4 r Ed strangs

cancelly is certainly a considerable

improvement over the GS.5 GB of CD-800Ms, as

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the Textus DVD's main advantage will be in the fact that the opinion exists to make the discs recordable. Some companies have said that they are welling to make their first DVD-BOIL drives of the predictions in recordable. BOIL drives of the prediction in recordable. BOIL drives of the prediction in recordable. BOIL drives of the prediction in recordable limits, are expected in 18 in an DEF seed of the prediction of the prediction of the prediction of the whicher or not the discs will be able to force and the prediction of the prediction of the disc. In the prediction of the prediction of the disc. In the prediction of the prediction of the disc. In the prediction of the prediction of the disc. In the prediction of the prediction of the disc. In the prediction of the disc of the disc. In the prediction of the disc of the disc. In the prediction of the disc of the disc. In the prediction of the disc of the disc. In the prediction of the disc of the disc. In the prediction of the disc of the disc.

Df course, the whole issue of price is perhaps the major hurdle still to be negotiated by those wishing to rush DVD to market. Will the technology be affordable enough to attract widespread adoption?

CR-ROM TO BYR: WHAT WORKS WITH WHAT [audio cd] [cd rom] [dvd audio] [dvd rom] [dvd video]

DVD developers' ell-encompassing goal is to make the DVD-ROM drive capable of playing a

DVD game consoles?

VD players will make playback machines and playback machines and playback machines and possibly recordable DVD-ROM drives for PCD is typically too expensive to be of interest to console manufacturers such bardware costs as time as possible (PlayStation and Sega Satura are the first tree mass-market CD-based game consoles, yet CD-ROM technology is

Army said this, all the major console mauricatures are watching DVD's approach with verying degrees of interest. All but littered agree the interest and but littered agree to interest. All but littered agree to green and individually DVD is the future for the game industry. DVD by the future for the game industry DVD by the properties of the table of that while DVD by the and of the test for the table that while over the properties of the table that while over the properties of the table that while the properties of the table that while the properties of the table that while the table that the table table that the table table table that the table ta

Along with Sega. The 3D0 company is expressing but most interest to 90 to the company has greatened by the company has greatened by the company has greatened by expressing the company has greatened by expressing the second transfer of 90 to 30 to 40 to



Boards like this enabled CD-ROMs to play FN

folks at 3DO feel that it may bring some unity and, perhaps even, crosscompatibility, to the dedicated gaming

market (which presently has none). "DVD has the promise of solving some of the big problems," says Toly Farrand, sonior vice president in hardware engineering and operations at The 300 Company, "The market is so freguented, there is no critical mass on one platform for developers to rally around. The alliance of DVD holds the possibility of creating some consolidation around the industry,"

arrival of DVD as those at 3DD. Sega's exact plans for the new format have not yet been revealed, but the company has nced that it is working to develop a DVD prototype system with Matsushita (anyone remember those Sega/M2 rumors?), Spokespersons from Sega have also expressed the hope that DVD will be a unifying format for which game developers can write. With that in mind, they make no bones about the fact that they feel Nintendo is, once againbucking the system by not endorsing DVD and, therefore, rejecting yet another disc format. "The interesting thing about it is, this little shiny disc format has become the gold standard as it relates to next-generation experiences," says Mike Ribero, executive vice president and general division of Sega of America Despite the fact that Sony was one

of the supplier the real value deeply which the control of the supplier the real value deeply with the control of the supplier that supplier the supplier that supplier the supplier that supplier the supplier that supplier that

DVD- or any disc-dependent game machine in the near future, Nintendo is without a doubt the most apathetic of the bunch in regard to the new format. A spokesperson had no comment on DVD, instead offering that "We have our hands full with Nintendo 64 and our other gaming systems."

of the revolutionary performance increase (in movie playback capability, just for starters) and the high cost of embracing DVD's ancillary technology, a full-system upgrade campaign — similar to Intel's campaign to promote the Pentium processor — is necessary.

"The main reason," explains Tom Jones, director of engineering at Toshiba, "is that the OEM (Original Equipment Manufacturer) channel will be able to stilly integrate DVD. I think there will also be an upgrade market, and there won't be a lot of leftover product." He's saying that this is something that ain't gonna be a hard sell.

SUPPORT FOR DVD from the decision game machine maniferaners, however, is not entirely as enthusiastic. In fact, the dedicated game companies like Sags and Sony, and in particular. Nimendo, how a range of nection ranging from the companies of the same state of the same state of the same state of the same state. It is also considered these companies has a CD-ROM based system to sall for a couple of more years at least (the last fifty flewy wars is to acknowledge that their storage formse of the same state (the last core to belief isonoprated.)

The first DVD-based machines to arrive in the home will be the first noninteractive DVD movie players, expected ship this fall

into the "little black box" all-in-one concept may also be part of the rationale behind a perceived lack of enthusiasm.

Either way, it would appear that although the first DVD machine will appear this fall with foshiba's movie-playing DVD unit, it may be some time (as long as two to three years) before console garning companies embrace DVD.

A spoksageron for Niterando told Next Generation into I/DV will not change the company's carridge-based approach (so no englet segeet from the only next-generation game company yet to embrace CD-ROMS). Also deven Sony has belon a very reliated approach to the D/D standard it helped crosse. As it are future TV-Roop systems, a spoksageron from Sony says, "The life cycle of the PisySation hopefully will be four to six more years.



We are always looking at new technology and Sony developed DVD, so it clearly will be a consideration at one point." But for now, Sony is sticking by the successful CD-

ROM based PlayStation Sega and The 3DO Company, on the other hand, have expressed much more enthusiasm for the new standard than their competitors. For now, however, Sega will only say that it is "looking at DVD very enthusiastically," and working with Matsushita on the technology. "If there is any skepticism, it's about when," says Mike Ribero, executive vice president and general manager of the consumer products division of Seea of America

Ribero will not reveal when Sega plans to release its first DVD-based machine. Still he remains optimistic, and says that Sega believes that DVD could revolutionize home entertainment and gaming, "Many of the games today come on a CD-ROM and only use half the disc," he explains. "But DVD will serve as the catalyst for the dation of the home entertainment systems. With DVD, you will be able to date all the devices on top of your television set: the game machine, the CD player, and the VCR. If you can consolidate it into one machine at an affordable price, it becomes very attractive," And this will then drive and promote DVD's use in other areas, such as gaming.

Another company with enthusiasm for (and, apparently, resources behind) DVD is The 3DO Company. Toby Farrand, senior vice president of hardware engineering and operation at 3DO, says that the company is not only excited about DVD, but has dedicated resources to research and development of DVD decoding solutions, to place the company ahead of the DVD

DVD does everything...

learly, DVD is still in the embryonic phase of its life Although it is still too early to say when it will arrive for a particular platform, be it movie player, PC or other station, it's not entirely speculative to

say that DVD will attempt to take over all forms of storage media as we know it. **DVD MOVIE PLAYER**

DVD will make its debut as a movie player. Dubbed the DVD player, the current specifications dictate that this particular DVD device will be able to play 133 minutes of MPEG2 (higher than broadcast quality) video MPEG2 (higher than broadcast quality and three channel audio with four subchannels on your television — from just one disc. Like video laser discs, you will be able to arch and jump to different earmarks on the disc. The DVD movie players are expected to hit the market for around \$500 this fall. igh the studios in Hollywood have announced their support for the DVD movie player, the debate over the right to reproduce content (with DVD-RDM drives being recordable and compatible with the movie player) has many Hollywood executives quite worried.

DVD-ROM

Shortly after the DVD movie player hits the market, the first DVD-RDM drives will shi for the PC. Initially, these units are expected to retall for somewhere between \$400 and retail for somewhere between \$400 and iOD dollars. With a storage capacity of 4.7 gabytes (versus CD-RDMs which hold 0.65 bytes) and vastly increased data transfer rates, the DVD-RDM will offer developers the chance to produce titles with broadcastquality video and

audio. In addition to the more immersive sound and video, the increased storage capacity will enable

the developers to place more levels and/or ore complex databases in their titles. Phillips. Sony, Toshiba, Matsushita, and NEC are expected to be the first manufacturers to hit the market with a DVD drive.

DVD GAME ROM

Like CD-RDM and CD-dependent game machines, there will be no real difference in the physical make-up between the DVD-RDM drives available for PCs, and DVD GAME RDM units that will eventually become part of dedicated game machines. When will DVD game machines appear? In general, it seems that the gaming manufacturers are content to wait on the sidelines for now and to let the folks on the PC side struggle with early compatibility and pricing issues. Representatives from 3DO, Sony, and Sega, wever, have indicated they aren't going to

SUPER CD

(DVD AUDIO)

Last, but not least, is the possibility of a DVD audio disc. The majority of current audio CDs, like many games on CD, do not use the entire space on their current media, and so the demand for DVD audio discs is almost demand for DVD audio discs is almost understand. The opportunity exists, however, to do more with audio DVD, especially if it is compatible with the recordable DVD-RDM drive. If those capabilities come to fruition, people will be able to record hours of digital o onto a disc at their discretion. In that sense, the DVD audio and DVD-RDM would elevate the disc medium to a place that the elevate the disc measure of the color of the



The 3DO Company may also see DVD as a means of wiping the game industry's slate clean, with a view to a 3DO-generated machine getting another bite at the pie. "Strategically, we think DVD's important," admits Farrand. Because the 32-bit platform is still-born, the [game] market is fragmented and, in total, it's disappointing for everyone. We

see the 64-bit generation as a major leap. Another hurdle faced by DVD is the need of an adequate amount of DVD movies, games, and software, to make a DVD player purchase more attractive.

especially with the DVD media."

The DVD dream isn't miles away form what was promised by Philips with CD-i, or indeed The 3DO Company's MultiPlayer, but both of these formats failed partly due to a lack of software support.

To prevent history from repeating itself, developers must rise to the challenge

Nintendo's decision not to embrace even **CD-ROMs** is testament to the fact that games shouldn't be judged on the size of their data

of producing software that makes specific use of DVD's strengths. Unfortunately for gamers, while this potentially means shorter loading times, surround sound, and no more multidisc games, it basically means more video. Lots more video. Tons of it.

The jury from the developer community is still out on DVD. A spokesperson from a software developer, who wishes to remain anonymous, went so far as to say that his company is "apathetic" about DVD, and called it "just another CD-ROM." The same person, however, conceited that "it will eventually be supported." Sierra On-Line and Electronic Arts are two of the few software developers which are willing to speak on the record about DVD. A spokesperson from Sierra said that the company has only two games in the works for 1996 that

feature live-action video and require multiple discs. While DVD would save the company money on manufacturing those two titles (lust one disc instead of six or seven) the folks at Sierra feel as though they aren't in need of DVD right now.

Pat Becker, director of Arts, said that while EA is excited about DVD, it's not looking for it to take hold of the market for at least a few years. "You can add surround sound," says Becker "And, there will be other things to exploit with the increased storage capacity. But it's years away from entering the mainstream as a gaming platform." Becker says that it will take time for DVD to make its way into a large installed consumer base and be accepted by the retail channel. Until it

sensational DVD game soon after the initial drives come to market, surely other developers will jump on the bandwagon and hunt for a piece of the action It would be no surprise at all, given the massive storage capacity, if the first games to come on DVD would be FMVbased, interactive movie titles. But the notential does exist to do more with DVD

does, DVD software development will not be a priority. But if the standard is

compatible and one company produces a

than minimize the cost of multiple-disc games by cramming them onto one. According to Paul Wehrenberg, manager of advance storage devices at Apple Computers and codeveloper of a functional DVD-ROM prototype (one of few known to exist at press time), the format can do much more than house FMV. "There will be many possibilities for branching through a huge data base," says Wehrenberg, "DVD has the ability to set up content that can predict what the user wants to see evolve. And [they] can have higher sampling rates and more channels, so there will be audio coming out which is just unbelievable."

But are game developers ready to do more? Next Generation doesn't believe so. Nintendo's decision not to embrace even CD-ROM technology is testament to the fact that a game shouldn't be judged on the size of its data. With many of today's best games not using up half of a CD (even with soundtrack and intro sequences), the last thing we need is yet more space developers will feel obliged to fill up.

DVD is coming there is no doubt But what the game community chooses to do with it when it arrives rema undecided. Let's hope that some lessons have been learned from the CD-ROM experience. Either that, or we'd all better learn to appreciate FMV.



So how does DVD work?

the heart of the DVD

remail lies its MPRC2
capabilities, MPRC1 is a
prictures Experts Group, an
example of the stablishment or
example of the origination of the
example of the

deliver images and audio rivaling those found in a movie theater.

In many ways, DVD will make the production of an interactive entertainment title much easier. Developers

entertainment title much easier. Developers will hopefully be able to spend less time worrying about compressing video data for storage on a CD, or trying to dodge the grainy, pixelated look of much computer-based video, and instead concentrate a little more on the quality of content. So how will it work?

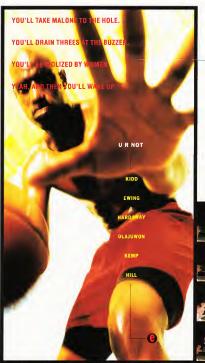
The chart at right shows general promisely and maken general programmative general matter general programmative general genera

Once the Ilies have caught up to each their in the autilipione, the output is fed to a disk builder where it is converted into a disk image. The output of each (audio encoding), video encoding, multiplexing, and disk building) are stored, and then all the data is swept through a channel encoder before it all reaches its final destination, the isser beam recorder.



REPRODUCTION AND DISTRIBUTION TO CONSUMER

In notifice to creating more material for a title, Digital Vision Discs will man one methods of excelling more material for a title, Digital Vision Discs will man one method of excelling excellent more developers. MPRICS will be the property of the size of the material by the property of the size of of the size



Shoot (

Okay, rookie. Here's

all the 3-D realism,

other wannabees-uh,

the basketball game





your chance to go up against the big boys. Play for an entire season. Find yourself man-to-man with intensity and sweaty, stinky action of playing in the NBA. And, with Multi tap, you can even link-up with seven we mean players, too. With over 300 NBA players and real plays, NBA Shoot Out is, without a doubt, of your dreams (which, let's face it, is as close as you're ever gonna get to the real thing).







What's What's Microsoft's game?



biggest consumer software company in the world. It has a reputation for winning - some would say at any cost. And now this giant corporate predator has turned a hungry eve to the game industry. So should gamers tremble or rejoice? And what's Microsoft's real agenda? A Next Generation report



crosoft is carparate evil incamate: a predatary, damineering saftware giant knawn far strong-arm tactics in the distributi channels, and late, slaw,

feature-laden (but atherwise derivative) saftware. It is a campany whose Windows aperating system - its flagship product seems almost burbasefully designed to waste processor cycles and RAM. Yet it thrives in a day-eat-day market where brute business muscle and a strong stamach for screwing competitors are almost as important to success as superiar products.

Such is the way many on the Internet and in the computer and popular press would have you think of Bill Gates' wildly successful giant Microsoft corporation

The game industry better beware. Haw can such a bruiser of a campany succeed in the fast-maving game market without resurting ta the same strong-arm tactics that have sparked recent numerous anti-trust investigations? Will Microsoft use its muscle in

4:37 PM

the marketing and distribution departments to ensure that conservative (read: lame) Microsoft games receive valuable shelf space? Will the copricious Windows 95 be forced down gome developers' throots? Will the PC goming world collabse, cripbled by the weight of a slow uninspired games library, drogged to its knees by a need to run through a shaddy buggy. cumbersame interface?

And so on, and so on. To hear the conspiracy theorists and cynics talk, one would expect a visit to the Microsoft HQ in Bellevue, Washington to resemble a journey to the pits of Hades itself.

Time for a reality check. When one stens out of the emotional shoes of a nervous PC enthusiast and begins to look rationally at the relationship between Microsoft and gaming, a very different picture emerges. Most of the fears about Microsoft come not from any actual insidious plots being hatched at the company's corporate headquarters, but rather from a lack of knowledge about Microsoft's real plans - and capabilities. When examined in detail, Microsoft's gaming itinery looks less like the machinations of some evil corporate entity and more like what it is - a comprehensive strategy from a huge company that wants to be sure it has a presence in every possible area of profitability. Monopolies aren't as easy to maintain as they used to be. Occasionally it takes some hard work to keep stockholders in the manner in which they have no doubt become accustomed.

That's not to say that Microsoft isn't a bullying, aggressive organization with world domination on its mind. Indeed, it could well be. But even if Microsoft wanted to monopolize the entertainment software industry, it's far from clear that it could. Despite what appears to be the company's best efforts, Microsoft has not yet managed to dominate the PC business software world (although its success in another area - PR dominance of the popular press may keep a casual observer from noting that). It has almost no presence in desktop publishing and in some areas it has especially targeted, like personal finance, it has lost out (in this case to Intuit's Quicken).

More importantly Microsoft may find that its unique skill base and experience is unsuited to a full-scale assault on the game world. Unlike the business software market, which to a large degree is iterative (improvements are made to the original

program with each successive version) the game software market is dynamic and unpredictable. A game can grow from being an idea, to a paper napkin sketch, to the proverbial "Next Big Thing" in a little more than a year, with maybe a team of just 10 or less working on it. A business application "hit," like Microsoft Word, typically requires thousands of work-years, multiple versions, and many years of market penetration before it achieves market dominance. Sure, the rewards may be greater. But the fact remains that it's a different discipline.

There is also a great deal more elasticity of demand for games than for business software. Most people don't need



processors, but how many different one-onone fighting games do you own? So it is doubtful that Microsoft could leverage anywhere near its full muscle in the gaming sector - it just isn't streamlined for the job. And what is certain is that even a company as enormous as Microsoft couldn't release enough quality software to keep users from looking elsewhere for titles. (Even if it could, all it would take is one slip before its leadership position was lost. Look what happened to EA, the once undisputed champion of sports games). The only company to ever come close to a stranglehold on a game market was Atari, and look what happened to it...

So what is Microsoft actually up to, and how will it approach the industry? Its game strategy is basically three tiered. In ascending order of importance they are development tools, consumer software, and promoting Windows 9S and Windows NT as game platforms.

Microsoft's major entry in the development tools market is via Softimage, producer of arguably the premier 3D animation program on the planet. Microsoft acquired the Montreal-based Softimage in 1994 and it still functions largely as an autonomous entity. The program (also entitled Softimoge) was written for Silicon Graphics workstations, but this January Softimage 3.0 for Windows NT was released and this summer, version 3.5 will ship for SGI and NT. With the purchase of Softimage,

Microsoft not only acquired a very profitable software program and some of the most advanced 3D developers on the continent, but it also enabled them to port Softimage to Windows NT, its multiprocessor, high-end operating system. This has not only helped to increase acceptance of NT in the workstation market, but has also staked a claim for Microsoft in the high-end of the computer graphics industry, aiming directly at Silicon Graphics' huge share of the content development tools market

It's an easy sell for Microsoft to promote Softimage to game developers. With a \$10,000 high-end PC system and Softimage, they can now do what previously required \$20,000-plus SGI machines. NT platforms can now also be used as "render farms" for SGI machines running Softimage. The results: SGI has lowered the prices on its lower-end systems, and there is a trend afoot in the development industry toward using the more inexpensive PC-based systems. Blue Sky, developers of VectarMan and a Softimoge beta test site, still uses the four SGIs Sega bought it for VectorMan, but new hardware is exclusively NT based. And the savings have enabled the company to hire more artists. Microsoft reveals that more than S0% of Softimage's revenues come from the game market.

Second, Microsoft is publishing games. This is nothing new; Microsoft has been publishing games since the days of Windows 3.0, and of course, there has almost always been Flight Simulator (Microsoft's perennial, sleeper hit). What's new is that the game division has gone from a microscopic group (including one person working part-time on Golf and part-time on Word) in 1992, to a fully fledged division with 80-plus employees What's more, the games themselves have gone from being "little games" (like

Windows Tetris and Salitaire) to more

robust products like Fury3.

Back to the conspiracy theorists... OK sa this is where Microsoft auits ploying fair. Microsoft can daminate shelf space in game stores - forcing its competitors out - through its distribution power. Its strategy, according to insiders, is to go to a store and, say "We think you can sell Y copies of title Z." If the store disagrees, well, they get nothing, and miss out an all profits on selling Microsoft's product. Result? Microsoft generally sells-in Y capies of Z — and the stares then make sure they sell them. It was this strategy that enabled Microsoft to get obout 7 million Win 95 upgrode kits in stores last fall, even though it only sald through about

a third of them by the winter haliday season...

Certainly, Microsoft has none of the distribution headaches that plague many smaller publishers, and this fact (plus the recognized Microsoft brand name) ensures that impulse buyers alone make most Microsoft games unqualified hits. According to its own figures, right now Microsoft could release a generic game box that says "Microsoft Windows 9S Game Enclosed" and expect to sell about 400,000 units - a number that would make the average PC software publisher drool with envy.

Still, since 1994, the number of PC game products in the market has almost doubled, so it is unlikely that Microsoft

could continue to count on huge sales with volume 29 of the Windows Entertainment Pock. In a notion that may be almost inconceivable to most of the readers of this marazine. Microsoft has chosen to ignore us (the hard-core gamers) and focus instead on what it calls the "casual" gamer. someone who buys only five to seven titles per year. That strategy focuses on the reliability of the Microsoft brand name, as well as solid but not necessarily groundbreaking games. It will keep the company on good footing (look how well it's worked for LucasArts). But it doesn't seem likely to lead to some massive takeover of the industry.

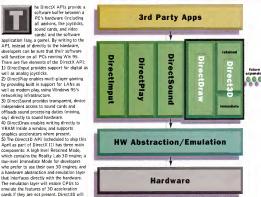
Direct X: Just what's going on? he DirectX APIs provide a software buffer between a PC's hardware (including all add-ons, like joysticks. sound cards, and video cards) and the software application (say, a game). By writing to the API, instead of directly to the hardware, developers can be sure that their software will function on all PCs running Win 95. There are five elements of the DirectX API: 1) DirectInput provides support for digital as well as analog joysticks. 2) DirectPlay enables multi-player gaming by providing built in support for LANs as well as modern play, using Windows 95's networking infrastructure. 3) DirectSound provides transparent, device independent access to sound cards and offloads sound processing duties (mixing, say) directly to sound hardware. 4) DirectDraw enables writing directly to VRAM Inside a window, and supports graphics accelerators where present 5) The Direct3D API (scheduled to ship this April as part of DirectX II) has three main components: A high level Retained Mode, which contains the Reality Lab 3D engine: a low-level Immediate Mode for developers who prefer to use their own 3D engines; and

that interfaces directly with the hardware.

The emulation layer will enable CPUs to emulate the features of 3D acceleration cards if they are not present. Direct3D will support Z-buffering, Gouraud shading, full-

light sourcing, specular highlighting, tri-

linear mip-mapping, and depth cuing.



tructions go from applications to the API's, instead of straight to hardware. The APIs ime modules interpret the instructions, abstract them for given herdwers, and then passee the instructions to the hordware (or emulates it if needed)

Looking forward into 1997 and beyond. Microsoft plans to continue to target the casual gamer, as well as releasing some titles that should get the attention of hard-core gamers. The most remarkable thing about Microsoft's game publishing strategy, though, is its breadth. Rather than concentrating solely on one genre, the company has products coming in the shape of sims, action, sports, strategy, rail shooters, god games, and more. See pages 53 and 54 for exclusive previews of some of these forthcoming games.

The other aspect of its gaming consumer products line is hardware. specifically joysticks and joypads. Selling game hardware is a new business for Microsoft, and one that seems to be introduced not so much for the long-term strategic benefit as much as for quick (albeit low) margin of profit. Its SideWinder joystick, which uses patented optical technology to give the benefits of both an analog and digital stick has been well received, and Microsoft also will show its game pad at E1. Bearing a striking resemblance to the Nintendo 64 pad, it is comfortable in the hand and should do well with the arcade-style games that are becoming increasingly prevalent on the PC. Microsoft also recently acquired Exos, a Massachusetts-based company that has a force-feedback joystick similar to the Immersion stick profiled in NG 17.

By far the most important part of Microsoft's game strategy, however, is its presentation of Windows 9S as a legitimate gaming platform, as distinct from DOS as it is from Nintendo 64 or Saturn.

The major hurdle to gaming on the PC has always been ease of use. Installing DOS games has traditionally been even more difficult than installing other PC software. With multiple standards for video cards, memory hassles created by DOS' 640 K basic memory limit, and the general user-unfriendliness of the system. getting games to actually work is sometimes more of a challenge than the games themselves. Some DOS games suffer a 35% or greater return rate simply because they cannot be successfully installed on the user's hardware.

Developing games for a DOS-based PC results in similar nightmares, as game programmers have to write routines for every single video card, sound card, and possible system set-up in advance. It's no surprise that they often failed to cover all possible combinations. And it's similarly

unsurprising that this has generally left PC games the strict domain of hard-core gamers and computer enthusiasts.

With Windows 95.

Microsoft seeks to change all this. Not only does Windows 95 make installation easier, it also makes game development easier thanks to a series of developer APIs (Application Programming Interface) and libraries known as the Game SDK (Software Development Kit). To get the







Above ere some of the grephic capabilities of Microsoft's Softimege. Originally for SGIs only it now runs on Windows NT mechines, with only negligible performence degredation

Game SDK, developers must simply join the Microsoft Developers' Network, which costs around \$500 per year - about the cost of goods of the CDs and manuals the average developer receives in that time. Microsoft then supplies these software libraries to game developers, making the process of developing a game designed to work within Windows 95 a whole lot easier. The major component of the 5DK is the series of APIs known as DirectX (see page 49).

The main complaint about developing for Windows is that as a program that puts a laver of software between the hardware and the user, it simply cannot provide the performance needed for a high-speed game. To get a game to run fast under Windows, developers generally have to break all sorts of rules - resulting in the same basic headaches that occur under DOS. DirectX, by providing a set of standard APIs, fixes some of this. Microsoft has "broken the rules" of standard Windows development to gain speed (such as DirectDraw's ability to write straight to VRAM in a window). And as long as developers stick to the "broken rules" Microsoft has developed for the DirectX APIs (written in extremely low-level code), everything will run fine. The advance of Moore's Law (which, pared down, says that hardware keeps getting faster and cheaper) also has helped lessen complaints about performance under Windows.

By writing to the DirectX specifications, developers can be sure that their software will run on any PC running Windows 9S. Microsoft takes care of the irritating task of developing drivers for all the different types of hardware that the game might be played on, not to mention doing extensive compatibility testing. The time and effort saved by being able to write to one spec also decreases development time and cost.

More importantly than just making it easier to develop and play games on a PC, the DirectX APIs make practical for the first time something that has always been possible on PCs - Plug 'n' Play, or widespread support for a variety of novel hardware. This is the single-most exciting aspect of Windows 95 as a garning platform, and it is not an understatement to say that this could be the single-most Important advance in PC gaming technology of the last decade.

Until now, if a hardware developer created or implemented a new technology. like 2D or 3D graphics acceleration, a new input device, a new sound card, or anything that took the PC past the stock "vanilla" stage, they would find that they had created an orphan technology, at least as far as game developers were concerned. Until the device gained enough acceptance in the marketplace (until it sold enough units), few companies would go through the trouble of writing the drivers to support it. Without the games, few upgrades were sold, and few new technologies were adopted. For example, despite the fact that practically every graphics card sold since the

introduction of the 486 has had 2D graphics acceleration, few PC games have ever taken advantage of it.

The only real standard to emerge on the PC since the days of Creative Labs' Sound Blaster card was the pathetic MPC (Multimedia PC), a Windows-based standard developed at the dawn of the multimedia age. With an MPC compliant PC, all you could really be sure of was that your machine could run the latest and greatest encyclopedia CD-ROM, but that's about it. Snore.

Now that's all different, With Microsoft developing (or more correctly, having hardware manufacturers develop) drivers for every hardware device conceivable, developers can now blithely write to the spec and not worry about supporting various hardware elements. It additional hardware is there, DirectX will sense it and use it. If not, the CPU will emulate the missing hardware. (When possible. If you have no sound card, there's not much the DirectSound is going to be

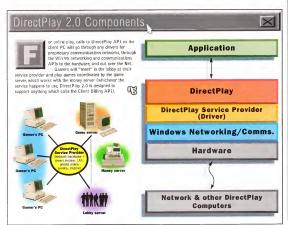
An internal Microsoft estimate is that 40% of the time a home PC is on, it's running a game

able to do with a stock PC speaker). Not every developer, however, is totally thrilled with the Game SDK. "I like to access everything," says one. "Now we're going to have to put our stuff into a 'black box.' It's kind of disconcerting to have that control taken away from you."

It's also important to note that because DirectX's features are present in software, fairly powerful machines are needed to be able to take advantage of DirectX in any practical way.

It's clear that with the

introduction and continued support of the DirectX APIs (which were developed with strong input from leading PC game companies), Microsoft is making an intense effort to support Windows 95 as a game platform. In the short term, the reason why is equally clear. Despite what people say to themselves to justify the purchase of an expensive home PC, games are the most popular home application, by far. An internal Microsoft estimate is that 40% of the time a home PC is on it's running a game. To ensure that Windows 9S is accented as an OS in the home, then, there must be a game presence on it. Especially



Ever wonder how "they" make all those randered intro movies? Chances are they started in a window like this on Softimage

considering that first-time buyers of home PCs are far less likely to withstand the rigors of installing a DOS game,

Microsoft's DirectX initiative provides technologies that Microsoft will be able to leverage in many other areas (and one of the first will be ActiveMovie, a new digital video standard that provides for MPEG quality video and internet hooks, among other things). But the real future for DirectX and the Game 5DK will be revealed with the release of DirectX III in August and DirectX IV in November. That's when DirectPlay 2.0 ships.

DirectPlay 1.0 provides APIs that enable easy LAN and modern play. DirectPlay 2.0 goes one further, enabling play over the Internet and online services. Of course, despite Microsoft's best efforts, the Internet is one of the few areas where

it's not the market leader. Yet,

For developers, things will be much the same. They write to the multiplayer DirectPlay 2.0 spec, much as they do now to the version 1.0 API. In DirectPlay 2.0, however, there are drivers for TCP/IF (Transmission Control Protocol/Internet Protocol) connections over the Internet. and any that third parties (such as private game networks like DWANGO and the ImagiNation Network or online services like America OnLine) may provide later: Now, multiplayer games are as easy to play online as they are over the office LAN. On the other side of the network line are servers, also provided by Microsoft. Due for release in August '96 is the DirectPlay Lobby Client software, with the release of the DirectPlay Lobby Server and DirectPlay

Game Server (which will coordinate

as well (see page S1).

gameplay - and billing - functions) due

in November. A working beta version of

the Lobby server will be released in August

There's nothing better than playing against another human, and technology is finally approaching the point where multiplayer online games are a real possibility. Microsoft's strategy, providing an easy solution for both the front and back ends of future online games will be nothing short of brilliant - if it can pull it off.

Why? It's pretty much a settled issue that for the foreseeable future most of us will be using a Microsoft operating system (Windows 95 or DOS) when we sit down in front of our PC, especially when playing games. However, many analysts predict that within a few years a sub-\$500 Net-cruiser box will be a reality. Although Microsoft's own Simply Interactive PC (SIPC) Initiative is aiming to cater for this emerging market, it is by no means assured victory. Why? Because the application software for these

Despite Microsoft's best efforts, the Net is one of the few areas where it's not the market leader. Yet

boxes may reside remotely (over the Internet), and the technology for Internet apps may be provided by a company like Sun or Oracle (both of whom are keen to promote their own non-Microsoft operating systems). Microsoft does, however, have an ace up its sleeve - and that is Direct Play 2.0. By convincing PC game developers to tool up and support Microsoft software today it ensures that they will favor using it tomorrow (and no

one wants to ever re-tool from scratch).

In the short run, what Microsoft stands to gain from promoting Windows 9S as a game platform is an increased share in the entertainment market the consolidation of home users around the operating system, and the development of technology that can be leveraged into other areas of the corporation. But these reasons are nothing compared to what the company stands to lose if the set-top box becomes reality and it isn't running Microsoft software.

How does Windows 95

stack up against the competitors that will be here in 1996 and 1997? The console versus PC war has raped on among gamers for years and with a few exceptions. Windows 9S doesn't change many of the arguments. One can't play computer games on a big screen TV, lying on the couch with a beer in your hand. On the other hand, barring XBand, you can't play online games on a console. Another leg up that Microsoft and the PC has on the consoles is that the PC is an open system Anyone can develop for it, royalty free, and gaining full access to the Game SDK costs a mere \$500 per year, far less than the going rate for a PlayStation or Saturn development kit, around \$20,000. (Of course, they will have to fight the likes of Microsoft for shelf space when it's time to sell the game, but at least it can be developed.) So while the most innovative designers in the world — Suzuki. Miyamoto, and other top talents - are Japanese, and develop for consoles first, the next "garage triumph," like Doom, will certainly appear first on the PC.

Do Sega, Sony, and Nintendo view Microsoft as a threat? Maybe they should. Between 1994 and 1997, inclusive, Robertson, Stephens & Co. estimate that the hardware unit sales of consoles will decline by 6.5%, while home PC sales will rise 107.1%. Sources at Microsoft contend that there is "no way" 32-bit sales will ever equal 16-bit sales (which topped out at about 20 million each for Sega and Nintendo). Both Sega and Sony have began publishing titles for the PC, and while the average PC configuration is still too underpowered to play titles like WarHawk



An early shot from Microsoft's forthcoming baskatball title, NBA Full Court Prass; crowd ere not in piece end gamepley still needs work

or Virtua Fighter Remix as well as a console that costs I/I0th as much, this fact is likely to change as 3D accelerators come down in price. Perhaps Howard Lincoln, NOA's president, put it best when he said "Do I think they [Microsoft] want to eat our lunch? Sure. Do I regard them as competitors? You bet."

MicroSoft Alphas



Close Combat



tomic, which is best known for the V For Victory series, looks to have truly outdone itself with this latest strategy game. You're in command

must truly mimic what actual strategy war games ever.

tired, demoralized troops around hattlefield commanders felt, which makes Close Combat look to be one A new realtime World War II strategy simulator from Atomic, Close Combat could be the most impressive PC game Microsoft will release in the next year

of either the US 29th or German 352 Infantry as the US attempts to fight from Normandy to Saint-Lô. France, just after D-Day, in this narrowly focused simulation. You command soldiers down to

the squad level, but what is most impressive about the game is the extremely sophisticated AI, developed with the help of a combat psychologist.

Depending of their fatigue level, the pressure of enemy fire. and their raw ability, troops may respond slowly, or not at all, to your orders. Send a tired squad to take a difficult objective and it will likely try it, but it may retreat as soon as things become too difficult.

The feeling you get as you send



cross the bridge into heavy fire with no tenk support

Format: Windows 95 Publisher: Microsoft Developer: Atomic Games Release Date: summer

Origin: U.S.



Deadly Tide

Even though it may not appeal to hard-core gamers, this rail shooter looks to stand above the pack

Format: Windows 95 Publisher: Microsoft Developer: Rainbow **America**

Release Date: fall Origin: U.S.

ou don't want to say "if you've played one, you've played them all," but the fact remains that the rail shooter is a well-defined genre, Still, Rainbow America (the developer of

The Hivel has taken some steps with Deadly Tide to ensure that it stands out from the Robel Assault-clone pack. First, the game features gorgeous 3D

graphics, designed by Amblin Imaging

Designers (who also do the graphics for SeaQuest DSV and Star Troir: The Next Generation). Also, Redbook audio combined with a realistic 3D sound engine make the audio experience compelling as well. On the gameplay side, you can actually move your craft through a full 360° of freedom, a greater level of control than provided by most rail shooters In short, this is definitely a

title aimed at the "casual gamer," and it should be one that will satisfy them.



teste, but et least



MicroSoft Alphas



Hellbender

The sequel to Fury3 is packed with hot new features. But will the gameplay egual the best the PC has to offer?



ellbender, the follow up to Fury3, should follow Fury's dependable gameplay - fly

above the clouds, and shoot things: swoop below the clouds, pick things off the ground, and shoot things; fly in caverns under the planet's surface, and shoot things, Animated cut scenes between the levels will advance the plot you're in a civil war in space. Where Hellbender should

raise eyebrows, though, is in its complete support for Direct3D. The game will feature Z-buffering, tri-linear mip-mapping, depth cuing (fog and haze shading), realistic light-sourcing, and will run



Publisher: Microsoft Developer: Terminal Reality Release Date: fall Origin: U.S.

Format: Windows 95





Though it's not certain, it hopefully will run decently without accelerators.

An entry into the wacky racing genre keeps the product line diverse

Monster

Madness

his is not your typical 3D polygonal racing game. You just can't run over and crush cars in Ridge Racer, But in Monster Truck Madness, you have entered the strange obstacle-laden universe

of really big trucks, Somewhat like Sega Rally, this title features extremely accurate physics, circuit and drag racing modes, fourwheel steering, six degrees of freedom, and same of the goofiest looking vehicles known to man, (F.Y.I.; Did you know that monster trucks float, thanks to their fat tires?) With eight-player network support,

digitized sound (from Big Foot, no less), fully rendered trucks, tracks and obstacles, - not to mention the ability to customconfigure your truck for different terrain types - Monster Truck Madness is a cool game. Not to mention the fact that it will be the first title to support the Jolt force feedback stick.

That makes it really cool.





Format: Windows 95 Publisher: Microsoft

Developer: Terminal Reality Release Date: fall

Origin: U.S.



You're an intelligent,

You're a crazy, disturbed individual

well-adjusted,

who would rather play

interesting, fun-loving

childish games against real people

game-playing adult

than use your time productively.

who loves making

You're sick. You know it. new friends.

And you're just like us.

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Wanna Play?"

THE FIRST ON-LINE CLUB WHERE YOU CAN PLAY FAST-ACTION, MULTIPLAYER PC GAMES OVER THE INTERNET.

For a free Mplayer Games CD, visit

www.mplayer.com (secret password: cranking)

Tel: 888-mplayer E-mail: info@mplayer.com Mpath Interactive 10455-A Bandley Drive, Cupertino, CA 95014 (continued from pege 10) up its game publishing division, from releasing just four titles in 1995 to a scheduled 10 in 1996.

Is this merely a few divisions of a large company unilaterally moving to the gaming sector. or is this part of a larger company objective? Bill: Well hopefully it's a larger company objective [laughs]. We certainly set out as such. You know, the use of the PC in the home environment is increasing and gaming is a big part of that. People love to play games, and most of the things you do to make games better are things that apply to other software as well. I mean, enabling the audio to work well and the graphics to be fast. Games are a great way to measure progress there because game writers are just super-demanding, and they've basically ignored Windows. Up until Windows 95, the way you wrote a game was you wrote around the operating system. Even Microsoft's own Flight Simulator was a DO5 product, and it's only now that we're building the Windows version of that.

And it was all just about speed. That whole notion of "Do our graphics layers give flexibility, or do they just slow things down?" Well, there's no harder-core audience than the gaming community to go out and ask, "What does it take?"

It always causes problems if you go around be operating system. I mean, like installing DOS games a couple of years ago, where you had a different audio card, or you sometimes used Windows, but you'd like to run games that didn't work under Windows. It was a nightmare.

And whe'r just working our way out of that. With the broad popularity of Windows 95 and the support from the garning gays and the hardware guys, you know, we're finally to the point where a person can say," refash, you don't have to know somebody who's an expert to do these things." NG: And Windows 95 has really been the focal point for all this effort, with providing an easy-to-gonit for all this effort, with providing an easy-to-

use "play-and-play" environment?

Bill: Games don't use the file system very much. So basically, until Windows \$9.5 games were written to the hardware. Now with the variety of audio cards and graphics cards that are out there, it was becoming as much of a nightmare for other deviety or the developers—testing and installing — as printer deviety were for productivity applications before, say, a decade ago when we finally searced to get, which were the productivity applications before, say, a decade ago when we finally searced to get. Which were the same printer of the printer governor that the printer governor the printer governor to get all of those definers done.

And so we said, "Hey, we're going to make Windows 95 attractive for game developers, so they'll stop writing DOS applications." I'm sure some people here were skeptical about ever getting those guys to stop going around it. Well, part of our breakthrough was that it turns out that — because the blitters all worked a little bit differently — PC hardware actually has some



Pictured here is the first Microsoft team before it moved from Albuquerque, NM, to Redmond, WA. Pictured bottom left is Bill Gates; at bottom right is cofounder Paul Alier

acceleration capabilities that the DO5 people weren't using. But by abstracting those blitters out, we actually gave people a layer where they often would run faster than they had with DO5. And this started to open peoples' minds. NG: Would you include Microsoft in the same category as Sony and Matsushita, as giant outside players, increasingly influencing the game industry? Bill: In terms of who's changing the platform? Who's coming up with new initiatives? It's fair to think about Microsoft. But in the game business, the neat thing to do is to spot the hot new games. And although there's a good chance those will be coming out of the companies you mentioned, there's certainly an equally good chance they'll be coming out of somewhere unknown.

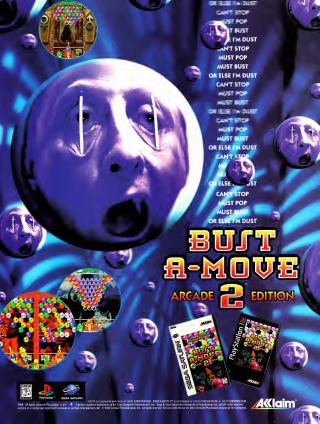
When 3% is too much...

NG: Let's talk about DirectQD, Microsoft's effort to make all PC graphics accelerators compatible with all software (when running Windows 95, naturally). DirectQD: in theory, provides the illusion of a standardized dD graphics acceleration period of the DirectQD APIs and drivers [Taving to "go through" Windows 95 slowes the program down a through "Windows 95 slowes the program down a east paysared Windows 95, there will always be a material sized bowledge.

Since marginal increases are often what separates a killer app (Doom, Sonic) from the "abor ansi," isn't there a danger that game developers will still bypass Direct3D, and hence Microsoft's Gotware, in pursuit of a competitive advantage! Bills: No. Three percent performance gains do not make the difference between a killer application and.

NG: You've sure that Windows 95 will only suck.

NG: You're sure that Windows 95 will only suck a 3% performance loss? "This is a gold rush period for anything related to the Internet. And games — I don't think will be any exception'"



Bill: Our job is to make sure that 3% is all it is. The thing that you're spending time on is

The thing that you're spending time on is derived the polygons or filling in the toutures, and service the polygons or filling in the toutures, and hardware, and you're not going through it again and again. If we find a state where conhected wants to go to the hardware (thus bypassing Windows 93; I whyer rood) going for that extra 3%, we'll tell them they're cray because it'll make their pol a nightamer. They'll never be able to with the polygons of the polygons of the polygons Windows 93; it more than 3%, then we need to make sure our API gets striker.

So no, I don't see a problem with that I mean, people always toll me that Windows would mean, people always toll me that Windows would never succeed because character mode was faster, and end characters would always scroll faster, and people could just go to the firms buffer faster than they could write through Windows. Well, today, you don't — except in the game world, and that's now changing. The speed differences in absolutes got small enough that the benefits were very, very strong.

And there are benefits to being able to receive a fix in the background, or being able to just hit a button and go over and look at something else. I mean, our vision of your computer is that, you basically never turn it off. And if you want to look up a movie review on the internet, or if you want to see about spending to be the seed of the seed of the seed of the between the diversity. The short-me thing is just ridiculous. (You know, Videogame machines don't have much in the way of boot time).

Online gaming

NG: Online gaming is currently the industry's holy grail. When do you think that true multiplayer, online gaming will be a reality? Bill: The lack of success of, say, the ImagiNation Network, has always been interesting. I mean, I don't use ImagiNation Network a ton, but I do use it a little because I have some people I play bridge with over the system. I think that - if it wouldn't crash [laughs] - it's pretty nice. But I think the pricing model there has held things back, and so it just didn't get to critical mass as a place people come to. With the Internet, on which you are going to be buying the connectivity for partly nongaming reasons - and there's no doubt the competition to provide that connectivity is going to be immense - it means that multiplayer gaming really can thrive.

Now, the latency that you have on the generic Internet is a problem for a lot of games, and you'll see a lot of hacks to deal with this. You know, interpolation hacks, things where you only play with people that you happen to be getting good latency with, or things where you actually disconnect from Internet and make a local call in to a server that you're all connected do, or people with the property of the pr



Off the record, many powerful figures within the game industry have expressed a fear of Microsoft, while pointing to its "bullyboy" reputation and Gates' ruthless business tactics

who do private networks. Latency tricks will be pretty worthwhile for certain kinds of games not for bridge [smiles], but for multiplayer action games it becomes a very big deal. I know that there's ourselves (and probably a

couple of dozen start-ups) who believe that the Internet will be the place where multiplayer gaming takes off. And so the level of investment is phenomenal — I mean, almost outrageous. And this is a gold rush period for anything related to the linemet, and games — I don't think — will be any exception.

NG: At the dawn of TV, much was made of its potential to educate and to culturally enlighten the public. In 1996, however, sporting events and lowest common denominator sit-coms make up the bulk of TV's output.

Given this, do you think that some interactive entertainment form — a descendent of today's gaming industry — will be the eventual killer app on whatever turns out to be the information superhighway?

Bill: Well, killer-app is generally a term that implies there's only one thing that drives ever ything. In terms of this, no, there won't be any one killer-app.

Wanting your kids to do well is as close to a

killer-app as any of this stuff, and that's why PCs are popular in homes with kids. That's where you get the super-high penetration. In the USA we've got 75% PC penetration into homes with a high de-iographic income and kids.

NG: So what is Microsoft doing to make online gaming a reality?

Bill: What we're doing with these direct multiplayer game APIs [as part of Windows 95] is "Boxing games are better on the consoles. But if you get really broad and include Myst-like games, I mean, give me a break!"



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NEXT GENERATION

abstracting the need for the game companies to bet on what type of connectivity comes along. If they just use the DirectPlay API, then Itheir games] work on local area networks, they work on the Internet, they work on a local server, dial up - and the user just gets to pick how he or she wants to go out and meet people

DirectPlay will help on multiplayer games because, in the past, somebody doing multiplayer games had to think through for themselves "OK, what do we want to do about meeting lobbies? What do we want to do about protocols?" and all those things. Now they don't have to worry about these things. And so, two years out, the percentage of PC games that will have a multiplayer aspect will be 70% or 80%.

Bill Gates: the gamer?

NG: Bill, do you play games yourself? Bill: Well, I'm a reasonably avid poker, bridge, chess, go, and checkers player

I played the videogames of the time, when I had more time: Frogger, Poc-Man, Defender. And back at Harvard I played with the PDP I that had the original Spoce Worf game, with vector drawing. The original cool PDP I application, in my dorm at Harvard when I wanted to waste time, was Breokout. That was the cool game.

NG: At the time of Microsoft's creation, did you ever think about making games

Bill: When we first started Microsoft we thought, "Well, should we do games?" And I went and met Nolan Bushnell [the creator of Pong] and hung around Atari, and talked to them. We always thought, maybe we'd get around to doing games in those early days because the kind of hacks that you had to do to make the games work were kind of appealing. But, that never became a focus. NG: Is there anyone who you particularly

admire or respect - or even fear professionally - in the gaming world today?

Bill: Well, in the world of sames there has tended to be people who come and do a few good things, and then, somebody else comes along. As I've said, Bruce Artwick has been able to renew the Flight Simulator franchise reasonably well over a period of time, but Flight Simulotor is the only game where you could say it was selling well six years ago and it sells well today.

In terms of same authors, it seems like they either make so much money and then go take it easy [laughs], or somebody else comes along. There's just an immense amount of talent out there - and remember the tools are just getting better. And that tends to tilt things more to the creative side than the bit-twiddling side. Although, I still think that for good action games, you'd better have some bit-twiddlers deeply involved or else it won't be that great.

Why? Because people always want you to push the state of the art. Doom became a strong brand partly because it was the first to do that technology, and that's only just starting to fade. NG: Does Microsoft fear any game companies? You say that CD-i initially posed some threats. Then there's that famous quote from Apple's Michael Spindler: In 1991 he was asked which company Apple feared most going into the 1990s. and he answered "Nintendo."

Bill: [laughs] They should have feared Apple more! NG: Indeed. But do you not think that with an 8-bit game machine in over one-third of all US homes, Nintendo could have leveraged its success into other areas of the computer business?

Bill: Oh, it's unbelievable. I mean, we're in this funny little suburb called Redmond in Washington and, when we first moved here I said to people, "Hey, we're the second largest software company in Redmond." At least during the fourth quarter, good old Nintendo would outsell us. Now that was when they ruled the roost, and the fad was in full swing. And now it's not quite as monolithic.

But, when you talk about business, "fear" is maybe not the perfect word to use. You have to have a real sense of what good work other companies are doing. You have to acknowledge their work and figure out, well, can you partner with them? Or do you internally or, through other partnerships, find those same things?

On the PC platform, we can recruit a lot of game developers. Nintendo isn't locking people up so they can't write PC games. Historically, Nintendo was able to do that versus other game platforms, but never the PC because it wasn't on

its radar screen So I don't think fear is the right word. We've always had this question of the



Last year's Wi campaign was the biggest software launch in history

"There's this notion that vou can sort of rip off the Japanese... That was the 3DO model"



This interview was conducted on the Microsoft campus, in an experimental, prototype "wired" house of the future. PCs in each room communicate with the house's occupants, as well as each other. The lights, heating, and appliances are all voice-activated







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"BOTTOM OF THE 9TH"



When Trip Hawkins was first starting 3DO and talking about his visions - which were very good, I mean, he's a very smart guy - I wondered "Wow, jeez, maybe he's going to draw the line between the PC and the videogame a little bit differently than I'd like to see it." [Laughs] But now he's not - at least as far as I know - a force in this arena

NG: So what happened to Trip Hawkins' vision? Why didn't the original 3DO machine work out? Bill: Well, there's this notion that you can sort of rip off lananese companies and - no really, I

mean, that's sort of the 3DO model. It's kind of rude [laughs] to have a business

model where you let a Japanese company do the commodity part, which you're licensing to them nonexclusively, so they don't get any of the upside of the software royalties, but they get just the console part, which is the money-losing part, and you keep the game royalties.

It's hard to say why the pieces didn't come together [for 3DO]. If the price had been different at one point, if they'd gotten a few more software developers... But the business model always had a hit of a problem in that 3DO didn't have enough money to make the platform successful and yet the piece Matsushita was given - even if things went well - well, they were just going to be a commodity supplier of that piece NG: So can any game machine thrive in the price bracket between \$400 and, let's say, \$1,200?

History would say no

Bill: I think it's pretty tough. It's pretty tough to squeeze something in the middle there. [When considering game machines] people are going to say,"OK, a few hundred bucks to keep my kid happy... I guess." Although they probably don't realize how many cartridges they're going to have to buy as part of that [laughs].

I mean, the big fundamental is, if you use the TV as the display and you have no local storage. you can get the price way down. But then, as soon as you start to have local storage and decent display, you might as well go all the way and have a PC. So I think if somebody made a game machine that was super, super, super good for like \$300 or \$400, you might be able to get it. But you would certainly have to have games that were way better than the games on the \$200 console before you could wake up in the morning and face yourself trying to sell a \$300 or \$400

NG: What does Matsushita have to look forward

to as it plans to enter the arena with M2? Bill: [Laughs] I think it's tough for somebody to come in with a new platform at this point. I just

think it's very hard to establish a new platform. Everybody, in my opinion, is very impressed with how well Sony has done. I mean, if you'd handicapped Sega, Nintendo, and Sony a couple of years ago, most people would have put Sony as

sort of the third most likely. Fourth. really, 3DO had a lot of mindshare. And the fact that Sony's done as well as it has is a credit to it.

Then again, if you look at it financially, nobody's making money like Nintendo made in the good old days.

Gunning for adults

NG: A lot of people are saving that if the game industry is to move forward, it has to start producing games which resonate with adults. A lot of people are looking to the continued increase in graphic resolution and sophistication as the key to doing this, as adults will play



Gates — or et leest, the grephic rapresentation of him — in the Bridge forums. Now that would be a win to remember...

once the games look less cartoon-like and more like real life, Do you buy this reasoning?

Bill: I don't think so. I mean, if you get better graphics then maybe you can do different types of games, which may draw in those people. But it's not like you take boxing and make it highresolution and then all of a sudden S0-year-old men say, "Wow, hey, I'm not going to the football game tonight, I am going to play that new boxing game," [laughs]

Until you really get the Internet where there are other people and an element of socialization, I think it's pretty hard to pull the adults in. I think that with the Internet, and the kind of socialization that's possible, the boundary between what's a game and what's not a game has always been a little bit unclear. And I think it's set to become even more unclear in the future.

I mean, if you're walking around in a fantasy space and you can do things that aren't normal things, is that a game? Or is that just an Internet superchat kind of thing? Well, the taxonomy is going to get so rich, that it won't be a black and white dividing line in this new world. Particularly with the PC, where you're going to get so much power and a high percentage of them with an Internet connection as part of that,

As we fudge that spectrum, then we'll start to null in a much broader demographic. I mean, that certainly is our goal.

"We always thought that maybe we'd get around to doing games because the kind of backs that you had to do to make the games work were appealing"

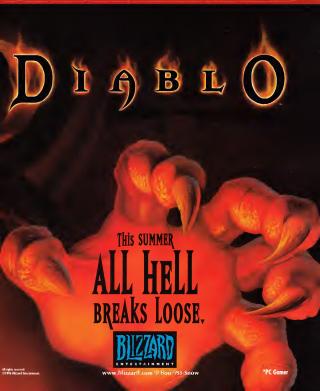


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Created by Legend Entertainment and based upon characters created and used under keense from Paul Reiche III and Fred Forc





Game previews like nothing else on Earth

hile it's surprisingly quiet on the home console front, that doesn't mean the game world is silent. Thrill to our exclusive, no-one-else-has-'em

previews of GURPS, Leisure Suit Larry 7, Dark Earth, X-COM III, Heroes of Might and Magic 2, plus in-depth coverage of Sega's latest miracle, Virtua Fighter 3.

68 Virtua Fighter 3 ARROADE

The latest Virtua Flohter from Sega's AM2 breaks boundaries and gets shockingly real After a long wait. Steve Jackson's catch-all

74 GURPS PC

role-playing system is headed to the PC



80 Wrinkle River Story samun

Sega of Japan will soon unleash the cutes game to hit home consoles in years

82 Dark Earth Po

A sprawling game about a dark, ugly work is delivered with style by Worldscape

86 Lords of the Realm II Po





92 X-COM III PG

The highly anticipated sequel to the one of

the finest squad combat games ever made 95 Prop Cycle ARCADE

Nampo brings the exercise bike into the 21st century - this is an arcade game?

96 Might and Magic II po

Hernes of Might and Magic set the strates name standard -- can the series keen un?

97 Blast Chamber SATURN, PS-3 A nonsport, four-player game with bombs?



100 Rayman 2 SATURN, PS-X one of the best looking side-scrolle

years makes a return trip - good, or evil?

105 G-Nome Po









110 Killing Zone PSX

twist that warrants more than a look



Virtua Fighter 3

Characters breathe, flex their muscles. react violently to being jumped on, and even follow the opponent's movement with their eves

Format: Arcade Publisher: Sega

Developer: Sega AM2 Release Date: Sept. (Japan) Origin: Japan ithout AM2, it's

entirely possible that

the 3D game experience would consist entirely of flight sims and Doomstyle first-person shooters. When Yu Suzuki unvelled Virtua Fighter in 1993, it was as if someone had suddenly turned on the lights - cars, planes, and the odd tank had been seen before

rendered in realtime, but to see human

figures moving realistically in a 3D

Yu Suzuki's AM2 team invented 3D fighting games. Now, armed with Sega's Model 3 board, it is ready to raise the stakes higher than ever before

environment was a revelation, and the possibilities this implied set the gaming world on its ear. The arcade experience would never be the same again.

Now in its third incarnation, the Virtua Fighter series continues to lead where others are content (or even struggle) to follow. AM2's Model 3 arcade board can push 1 million fully texture-mapped polygons per second, more than three times as many as Virtua Fighter 2's Model 2 board. At the heart of the system is a graphics









denth of realism has to be seen to be fully appreciated, and is extremely close to the high-quality images in Sega's Virtua Fighter CG Portrait

series for Saturn, except of course. now they all move in realtime. Other character upgrades

now flows independently of the body

- an obvious extension of Lion's

bouncing west straps in VF2.

taken to the next level. This

include new, additional sets of costumes, and (details again) the strong possibility that each character will speak using his or her native language or accent. Last. following the pattern set from VF1 to VF2, all the old characters have been retained and two new ones added. The first is a new female fighter called Aci, an akido expert dressed in a long, flowing kimono. Early demos show her looking extremely calm and relaxed, all the while throwing opponents around like toy dolls.

Of the second new character little is known, except that in marked contrast



Specs

CPU: • PowerPC 603e Resolution: • 496x384 or Graphics: . Geometry engine averaging 1 million polygons/sec Renderer: • 60 million nixels/sec · 24-bit textures

- Micro-textures
- Z-buffering
- · Trilinear Interpolation Shading: • High-specular Gourand shading, fix shading and flat shad · Texture and edge nultilayered anti-aliasing
- Lighting: Parallel lights 4 spotlights Special effects: • Fog
- . 32 levels of translucency
 - Sound: * SCSP x 2 (same chip as used in Saturn) • 16-bit CPU - 68EC000 . Sampling @ 44.1 KHz . 64 voices (2 stereo pairs) . MIDI interface
- perhaps more impressive still. The faces alone are each composed of roughly 1,000 polygons, so expect to see their expressions change with the fortunes of battle. As seen at the recent AOU (Arcade Operators' Union) and ACME (American Coin Machine Exposition) shows, characters also breathe, flex their muscles, react violently to being jumped on, and even follow the opponent's

movement with their eyes. Also, clothing

Tecmo and Jaleco.

This high-speed graphic

complexity enables VF3 to present an

seems clear that bringing those details

the fighters themselves and the overall

environments where combat takes place.

unprecedented level of detail, and it

to life makes up the bulk of the improvement from VF2 to VF3, both in

Dural's new look is the most

immediately noticeable example of

Model 3's power. Her entire surface is

oft-made comparison to the liquid metal

smooth and highly reflective, and the

T1000 of Terminator 2 is a fair one.

This is especially true since Dural now

morphs from a mere puddle into a fully

realtime is nothing short of astounding.

However, the human characters are

sculptured female figure, and the

involved in making this happen in

technical skill and hardware power

Aoi is an akido expert dressed in a long, flowing Kimono. "Butcher" is an oversized, obese wrestler

to the slim, almost fragile-looking Aoi, he's an oversize, obese wrestler, capable of taking enormous punishment. In fact, most of his fighting style seems to be based on allowing opponents to hit him,







cee of Jecky'e steps Model 3 cae hendle up to four spotlights and up to 32 levelo of traceluceecy

Sege AM2's Yu Suzuki is interviewed in NG 11. The sext most enticipated title from AM2 is Doytone USA 2, due later in '96



enormous rolls of fat as the basis for counter-blows. The majority of the rumors pin his name as "Butcher," although this seems doubtful, as it would represent a marked departure from previous VF nomenclature, which tends to favor more plausible character names and designs.

and then using the rebounds off his







However, while

the new characters and dramatic strides in character graphics are awe-inspiring, it's the complete overhaul given to the game's locations which represents the most significant difference in gameplay from previous installments. The square, single-texture combat arenas we've become accustomed to have been replaced by a much more varied set of surroundings. It seems that AM2's tinkering with the formula when designing Fighting Vipers has influenced its approach to VF3, and while the classic VF "ring out" has not been removed entirely, AM2 has worked

to enable more interaction with the

characters' environment.

roughly circular, sand-covered island. Lau's stage is bordered on two sides by walls, and Lau has been given new moves to take advantage of them. Jacky's stage takes place on a high-rise construction site, and it's not hard to imagine what might happen if the transparent surface beneath him were to shatter. Once again, the details are everything. Early demos

Jeffry's stage, for instance, is now a

show sand flying off Jacky's boots when fighting on Jeffry's island, and fallen opponents pushing aside

the grass in Kage's glade. Other changes and improvements to gameplay are more subtle, yet more

profound. As Yu Suzuki stated in his interview with Next Generation (NG 11), "Virtua Flahter 3 will be a game in which the fighting is closer to actual martial arts, with character motions that are more realistic than VF1 or VF2." To this end, the most notably unrealistic feature of the first two games - those odd, high, floating jumps - have been replaced by more natural kinematics.

From the makers of...

Sega AM2's credits quickly reveals why it's the most influential arcade team in the world: 1985: Hang Dn, Space Harrier 1986: Enduro Racer.

1987: After Burner 1988: Power Drift 1989: Super Monaco GP 1990: G-LOC, R-360, Radmobile

1992: Virtua Racing 1993: Virtua Fighter 1994: Daytona USA, Desert Tank, Rail Chase, Sport Fishing, Virtua Cop, Virtua Fighter 2 1995: Cool Riders, Fighting Vipers, Indy 500, Rail Chase 2. Sport Fishing 2, Virtua Striker. Virtua Cop 2, Wing War 1996: Gunblade New York, Sky Target, The Sonic Fighters, Virtua

Fighter Kids (Kizu). Virtua Fighter 3





Pei, who is erguebly the fastest of the VF cost, will be even quicker still wi

Since these

supernatural leaps were originally created to enable the escape from potential ring outs, other means of getting out of the way have been included instead: each character now has a method of side-stepping the opponent, in a fashion similar to Battle Arena Toshinden's sideways rolls, but with a more natural feel. (Other 3D fighters who include similar techniques are Midway's War Gods and

Namco's Soul Edge.) Other countermoves have been added, along with better techniques for escaping throws and holds. Overall, the emphasis on creating a system of extremely true-tolife hand-to-hand combat has gone

through its third evolutionary refinement, and the results are more solid, intuitive, and in tune with real-world physics.

So overpowering is the Model 3 board that any conversion to Saturn is bound to represent serious technical hurdles. The modest-by-comparison demands of adapting VF2 required a lot of clever "cheating," and working around Model 3's technical prowess

may prove insurmountable for Saturn. But that's for the future, and for a vastly different segment of the market which AM2, as an arcade division, need not be concerned with - yet. For now, If there was any doubt of Sega's complete dominance in the arcade arena, VF3 shatters it.

If there was ever doubt of Sega's arcade dominance, Virtua Fighter 3









Lau'e stego is impressive, with walls on two sides end on esym textured floor. Cen't say much for those jackess siecke, though

Frank wants, Frank Gets...















Frank demanded motion-captured fielding and computer-rendered perfection before he would unleash his home run power!



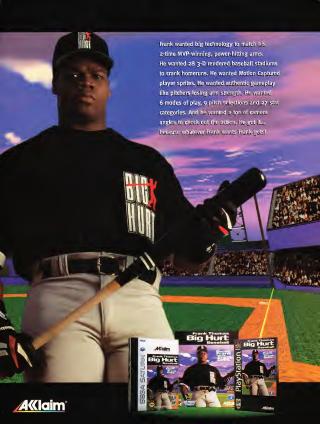








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NEXT GENERATION June 1996

G.U.R.P.S.

Format: PC CD-ROM Publisher: Interplay Developer: Interplay Release Date: winter Origin: U.S.



There's eathing quite so satisfying as toasting one of your opponents with a shot from a flomethower. Not recommended for close quarters combat

teve Jackson is no newcomer to either the pen-and-paper roleplaying market or to computer gaming. Back in the early

1980s, two of his most popular board games, Ogre and Car Wars were converted over to computer formats by the then-king of CRPGs, Richard Garriott, and his teams at Origin,

Shortly after Jackson released what was to be the ultimate answer to roleplaying. Called G.U.R.P.S. (Generic Universal Role-Playing System), the new game was to answer all of the problems of conflicting roleplaying systems by laving down a standard set of rules that would work in any of the system's myriad universes. In this way, players could use the same basic rule book to create a cowboy, an alien, a martial artist, or a standard Tolkienesque adventurer, requiring only a few rules specific to their home realm

to round them out. The fiedgling system

Computer role-playing games get a shot in the arm from one of the biggest names in pen-and-paper gaming



players to go to towe with the most powerful ermemeets of the future

quickly gained popularity and soon there were a whole set of worlds for players to explore ranging from ice-locked prehistoric plains to the powerstacks of a cybergunk future.

Even with the success of the new system and the stabilization of the PC as a CRPG platform, no plans for a computer release were announced. Then in early '94, Interplay announced that it had acquired the G.U.R.P.S. license and was beginning work on a new set of RPGs. Before gamers had a chance to get too excited though, Interplay also managed to grab the rights for TSR's AD&D world out from under SSI.

G.U.R.P.S. answers the conflicting problems of roleplaying systems by laving down a standard set of rules

forcing many to wonder whether Interplay would still continue work on the G.U.R.P.S. project. After a long silence, Interplay is now finally ready to show the details of its long development cycle, and while it remains to be seen how well everything will work in the end. the individual pieces have the potential to change the face of computer roleplaying forever.



There's e lot going on in each of the towns, from straightforward violence to hidden plottines that will require subtlety and diplomacy to uncover

Since G.U.R.P.S. is designed to work with any time zone or fictional setting, the first thing developers had to do was to decide which universe the new game would be set in. In the end, it was a look for something new that led the development team to its decision. Tim-Cain, the game's producer explains: "We've put together a post-nuclear game in the same sort of genre as Wasteland, but of course, we're not a sequel to that game. It's set in the very early part of the 22nd century, just after a nuclear holocaust, and your character has been raised in one of the civil defense vaults that the population has been forced to inhabit. The basic storvline is that you have to leave the relative comfort of the vault to find a chip to repair the bunker's water purification unit."



get a chance to venture into a world that will be completely new to them. As the game continues, characters will discover that there is a great deal more to this quest than first meets the eye. Cain continues, "We plan to have a lot of subquests. They aren't really necessary in the sense that if you don't do them you can't finish the game, but they will be necessary in the sense that in order to finish the game, you're going to have to gain certain skills that can only be improved through use. If you don't do any subquests, you're never going to get any character points, and if you don't get any character points, you're never going to improve," he adds.

Obviously, the multiworld flexibility of

With this opening, players will



Nonpleyer cheracter feces ere surprisingly full of intricate expressions

the G.U.R.P.S. system lends itself to pan-universe adventures, but gamers will have to wair a little bit longer for that sort of play. "We actually worked with the game designer who favored! the "G.U.R.P.S. Time Travel" manual and worked out a complete time-bravel adventure, but it was just too much artwork for us to get done in a

"We've put together a post-nuclear game in the same sort of genre as Wasteland, in the early 22nd century"

a ociicar j

reasonable amount of time," Cain maintains. Fortunately, the future still holds the possibility of a multiworld adventure, as the team can make use of existing art along with new creations and pour it all into the system's basic combat and character creation system.

One of the strongest aspects of G.U.R.P.S., both the original and computer versions, is its detailed character creation system that enables



Unlike most roleplaying games, G.U.R.P.S. uses a hex-based, rather then grid-based, movement and combet system. While it's a little difficult to get used to, the system enhances multiple terget effects in combat

both advantages and disadvantages in player's father gos. Player's forther gos. Player's forther generated and the much more personalized than in other systems, creating ampenigle style that is much more individualized and therefore interesting, claim copalais, "We've to a huge number of skills, just counting combat alone there are dozens. Each of the different types of rifles, plasma weapons, bard weep flamethrowers require particular gue flamethrowers require particular gue skills. There are other combat skills like



fast-draw and dodging that enhance players' fighting ability. Outside of combat, we've got different reactionbased skills, like diplomacy, fast-talk, sex appeal, and acting," These are things that enable the player to interact. with the people onscreen and get better reactions than you would normally. In the end. Cain and team had to cut a few of the disadvantages and skills because they didn't fit the game.

"I actually made a rule with the designers that if there was an advantage or disadvantage or skill that

had absolutely no bearing on the game, then I

didn't want it in



sed for a slaw of

there. The characteristic Funuch out thrown out because there is no actual sex in the game. Cotorblindness staved in because we will force

players with this disadvantage to play in a gray scale mode," he adds No matter what mode players end

up in, the designers at Interplay have gone out of their way to ensure that the graphics measured up to the rest of the game. Besides beautiful combat scenes (reminiscent of X-COM in both look and play), and fully animated icons, the game features a sort of "talking-head" conversation system that is like nothing ever attempted before. After the team worked out exactly what it was after, a sculptor made a clay head that fit the bill. From there, the artists took the completed head and carefully studied it to see what parts of the face needed to

be animated most in order to create a realistic final image. Using a Faro Space Arm and the VertiSketch software, the team digitized the head, and then used the LightWave modeling software to do necessary geometric corrections. Next, texture maps were created in Photoshop and laid onto the modeled head. Finally, the art team began working on the animation. Geoff Gregor, one of the artists on

the G.U.R.P.S. project explains the technique: "Usually you start with conceptual art, and you try to figure out what the character is going to look like. predetermined by the writers. A lot of times we'll either use photos or look at our own faces moving. You'll find that you'll make faces in the mirror a lot to see which



Besides beautiful combat scenes and animated icons, the game features a "talking-head" conversation system

to match as closely as possible to the text spoken by that character. The end result is a conversation system enabling players to make judgments about their current standing with the creature they are interacting with - based solely on that character's facial expressions

way your face is moving when you make

different expressions," Gregor explains.

Once animation is completed, it's made

G.U.R.P.S. has everything necessary to be the best roleplaying game of all time if the team can manage to pull the pieces together (and if the program can run on machines consumers are likely to own). Though it's still to early to tell. the team at Interplay is very confident and judging from early runs, it has every reason to be.







moving to e set of polygone, end finelly mepped with finished textures

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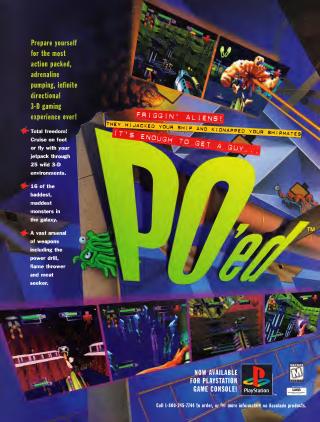


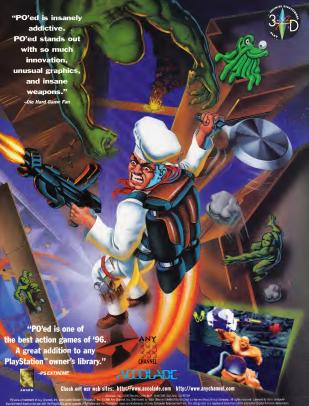
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Wrinkle River

Sega of Japan gets ready to release still another RPG for the Saturn — and it's cute as a button



and yee, see evolves with the story

roillat.	Jai
Publisher.	Seg
Developer:	Seg
Release Date:	lun

a Japan

Origin: Japan

rinkle River Story is the latest in an increasingly long list of RPGs available for Saturn in Japan, which is starting to gain a reputation as the Japanese system of choice for this genre, the most popular

among the Japanese. While the game uses 2D sprites, it depends heavily on the CD storage capacity of Saturn for improved graphics, sound, music, and overall length

Wrinkle River is set on the planet Mamuna, where the despot Muma has ruled for years with an iron fist. His dark magic is beginning to run out, however, and if he can't find additional sources of power he will soon

"disappear and melt into nature." Seizing the opportunity, the typical small band of adventurers set out to black him. They're led by Kitchu, a magic fox, and her companions Balel, a squirrel, and Lalala, a rabbit; if this sounds like the game is aimed at a younger audience, it is, In Japan these are known as "kawaii" or "cute" games. Gamenlay is still. surprisingly sophisticated though, and the level of challenge appears to be

quite high. Consider Kitchu's third sidekick, Putchimoku, Putchimoku begins the game as a seed (with legs and a pair of ears - cute huh?), then slowly grows to maturity over the course of the adventure. Kitchu can use him as a weapon, and as a way to modify certain

spells, and the powers change with each stage of Putchimoku's development. Certainly, this is not the sort of game that's going to appeal to the Mortal Kombat audience. With its crisp, colorful graphics, simple, efficient interface, and what appears to be a

long, involved storyline, RPG fans

may find this one to hard to resist. U.



skle'e luch grep









kie River Story turns its ettention to yo sterting them early, and getting them hooked so they keep coming back



d use of CD storeg

















Dark Earth



Dark Earth's main hook is its intricate world. The broad scope and deteil of the game's design is also emong its biggest strengths

Format: PC CD-ROM
Publisher: Mindscape
Developer: Worldscape
Release Date: November
Origin: France

ew game genres have

been through more

No one ventures into the Dark Earth, where light never shines, the air is thick and cold, and nightmarish creatures roam the darkness

changes over the years than graphic adventures, and with good reason. From the original "high-res" adventures of Apple II's heyday, which added the first graphic screens to text adventures. through to Alone in the Dark, which used 3D, polygon-modeled characters on top of 2D, prerendered backgrounds, this visually intensive style of game has responded dramatically to every new change in technology. Especially graphics technology. Now, Dark Earth represents the next leap, utilizing not only 3D modeled characters, but adding

The game is set in the third millennium, when things are really bad. Years before, a comet passed close to the Earth, showering the planet with thousands of meteorites and enveloping.

real-time light sourcing.

Mindscape brings the dark into the light for the next generation of 3D modeled graphic adventures



While these geme screens ere still early, they clearly showcase some of Derk Earth's features. Teke note of the extensively light-sourced shedow

the atmosphere in a shroud of black dust. No one ventures into the Dark Earth, where light never shines, the air is thick and cold, and nightmarish

creatures roam the darkness. A few remnants of civilization still exist, Dotted

over the planet's surface are areas where breaks in the clouds allow the light to shine through. These are the Stallites, fortified cites where the survivors of the catacytom gather to worship the sun god. In these refuges from the dark the last humans try to understand the technology left over from before the comet, and fill neew ways to conserve and channel the planet's most necessious commoditive light.

This setting may be oddly reminiscent of Roger Zalazny's Jack of Shadows, but the scope and direction are completely the designers' own. The





he prerandered haracters use new echniques to echleve incenny reelism



If this level of grephic complexity seems impressive, understand that the final gene should have an even finer level of detail



Stallites are under the protection of the Wite, a religious order of elders who know the secrets of the Runkas, the some of the sun and the ancient guardians of earth. In the game's strange world, the player takes the role of one of the servants of the Wise, a kind of religious police force which opposes the order of the Disciples of Darkness, which follow the veil Shankr Lord and would destroy the Stallites and send Earth into total chaos.



If there's one thing the French can claim as their own in game design, it's style. This game has style to burn

> dark, forced to survive by absorbing the life force from other beings.

Most of the work on the game is building game at Mindscaper's development house in Bordeaux, France. As we've pointed out before, if there's one thing the French can claim as their own in game design, it's style, and Dark Earth has style to burn. Not only has there been a great deal of work on developing

the game's backstory and scenario, but an incredible amount of thought has gone into carming the game's world with as much authentic detail as possible. This is especially important because the game takes place completely inside of a 3D environment, in which it would be extremely difficult to hide much from the player.

This "go-anywhere-and-look-atarything" approach is proving to be somewhat time consuming to produce, but the results are worth it — from our initial impressions, Dark Earth doesn't look or play quite like any other game. All characters in the game are fully

3D modeled and texture-mapped, although the game does use prerendered sequences for certain cut-scenes and during some conversations. Even here, however, new technology is being applied, since the designers at Mindscape Bordeaux have developed a new character modeling and animation process. The different features of a character's facial model and texture maps - the eyes, eyebrows, nose, cheekbones, etc. -- are chosen separately from a collective character database (somewhat like the "Identikit" process police use to put together composite sketches), so that every character created Isn't based directly on any given live model, and is therefore unique.

Likewise, facial animation

is broken down into individual movement routines for each expression and spoken syllable, which enables the animator to create extremely lifelike facial movement without the need to motion-capture every single spoken line



e geme's hero is slowly becoming e enkreeture, on evil dweller of the derk



ng alphas



Technology left over from before the disaster merges with now devices designed to harness end chemnel that most precious resource: light

or facial twitch. This process has been tried before with fair to moderate success, but Mindscape's designers have refined the procedure to produce extremely lifelike motion.

Few graphic adventures, past or present, approach the level of depth and complexity that Dark Earth appears to have

This is good because there are a great many strange and fantastic characters to be encountered in the course of the game. In fact, the backstory is so deep, and the animation process creating the characters produces such impressive results, that Mindscape is currently involved in talks with Paramount TV to produce a weekly syndicated series based on the game. One which, like the Canadian children's show "Reboot," will be entirely computer animated. Mindscape is also planning a spin-off game, yet to be titled but planned for a first quarter '97 release, which would be a military strategy sim based in the same universe.

Few graphic adventures, past or present, approach the level of depth and complexity that Dark Earth appears to have. From its nee-gothic architecture, to its odd blend of magic and technology, Mindscape has created what may well be one of the largest and most unique titles of the year.



ark Earth's unique erchitecture, a mixture of gothic and industriel fluences, is both familiar and strenge at the seme time





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he games go to Al

Lords of the Realm II



this title won't dreg action fans to the softwere sto who understand the joys of a slow conquer will truly enjoy this sequel

"When you can bring a castle down by aiming a battering ram or a catapult at it in realtime. it's a lot more satisfying"

Format: PC CD-ROM Publisher: Sierra Developer: Impressions

Release Date: Spring '96 Origin: U.S.

> he original Lords of the Realm put players in charge of a medieval kingdom and pitted them against the realistic problems of

war poverty, and hunger, New in Impressions' return to this land of knights and peasants, the company has added an Intuitive Windows interface. more enemy interaction, and modem play to create a title that promises to deliver exotic gameplay to fans of economic sims and strategy games alike.

In addition to the incorporation of weaponry like battering rams and





ticelly cen feel the battering rom and the catapult teking castles down

With a slew of new features, weapons, and interfaces, Impressions' sequel also boasts the promise of realtime combat









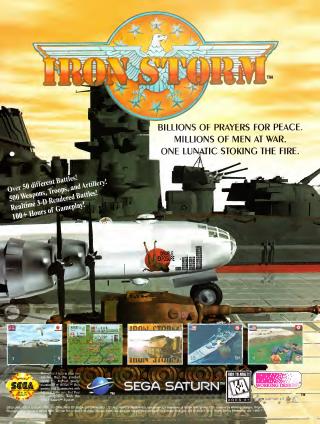


catapults, Lords II will take the same realtime approach to combat that has made games like Warcraft II and Command and Conquer such hits, Impressions' General Manager David Lester explains, "We wanted the game to be more multiplayer friendly, and one way to do that was by adding realtime combat. Besides, when you can bring a castle down by aiming a battering ram or a catapult at it in

realtime, it's a lot more satisfying." Several levels of player control enable novices to play without needing to understand every aspect of economic control, but enable veterans to exercise very detailed control of what goes on around them. "The micro-management potential is still there." Lester adds. "But it's much easier for people to get

by without heavy micro-management ." Despite dozens of different releases in both the sim and strategy categories none have guite the mixture that Lords of the Realm II promises.





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Leisure Suit Larry 7:

Yank-her's Away!



gers to the engineer) by incredibly beauti





n the world of gaming dozens of heroes come dressed in armor but it takes a real man's man to brave the perils of a graphic adventure

dressed in nothing more than a white polyester suit. After a two-year hiatus, the infamous Larry Laffer has returned. and Hell's coming with him - if your idea of Hell is being trapped on a cruise ship full of ridiculously gorgeous babes.

Theological concerns aside, Larry creator ALL owe is sticking closely to the form that's carried the series: topnotch animation, top-heavy women, and nary a serious comment to muddy the low-brow humor. Contrary to rumor, the designers have chosen not to go the route of so many games and switch from animation to FMV. Says Lowe. "We explored video, but what we found





ng, bald, end mele. The term "fentesy gaming" tekes on a new me

One of gaming's most venerable heroes returns for his seventh installment.

Format:	PC CD-R
Publisher:	Sierra
Developer:	Sierra

we did straight video, it becomes not

Release Date: October Origin: U.S. out was, we're writing cartoons here... if

only ludicrous, but obscene [laughs]... We were going over the list of gags we had and just said, 'oh no, you couldn't even do this with blue screen!" ... what we came back to was that we liked what we'd done in the past and we want to do that even more. We've got a guy drawing babes that could not possibly exist even Anna Nicole Smith pales in comparison!"

The game's new interface jettisons an Icon-driven system in favor of simply clicking anywhere onscreen. This calls up a list of actions possible with that object, from which the player chooses. In a surprise move, the designers have also included a low-end text parser, so that players can enter their own

"We're writing cartoons here. If we did straight video, it becomes not only ludicrous, but obscene"

commands. Says Lowe, "You won't be able to type in a whole sentence but you can type in verbs, and [the program] will recognize a lot of the ones that are obvious. You won't have to do it to finish the game but there will be a few extra things to find and we'll hang a bunch of extra jokes on it. "

The lokes are the heart and soul of the Larry series, a tradition Lowe and his team are committed to following. He concludes, "We're definitely swinging a little bit bawdler on this one... [but] the whole point of Larry is not the girls or the nudity or the sexual content, it's the humor. We've laughed a lot more than we've talked about sex. If you want real screwin', you're better off renting a video for \$3, but if you want humor, this is the place to go,"



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PC CD-ROM

PlayStation









X-COM: the Apocalypse

Microprose's new sequel makes use of a new engine, and adds character interaction to its"UFO"-based alien invasion combat series

Format: PC CD-ROM Publisher: Microprose

Developer: Microprose Release Date: winter Origin: U.S.









he original X-COM: HEO Defense was a deserved hit. Squadbased, tactical combat games rarely get better, and its

resource management was an irresistible combination few serious gamers could pass up. Its immediate sequel, Terror from the Deep, was a mild disappointment because, while it offered the same incredible gameplay. I





e elien werships ere ebout the size of a city bloc

offered no additional features or improvements, amounting to little more than a mission disk for the original game. However, if Microprose is to be believed, that was part of the plan all along: to release a quick sequel to satiate the X-COM-crazy gameplaying public, and then to design an entirely new engine and expand gameplay in X-COM part III.

Hence, X-COM: The Apoca/vose, which takes the series in a new direction, one even closer in concept to the game's inspiration, Gerry Anderson's "UFO" television series from the early 1970s.

The year is 2084, and for 38 years all of mankind has lived in a single. sprawling, self-contained city called Megapolis, Conditions inside the city had reached a state of near utopia until 2070, when things inexplicably began to fall apart. Civil unrest, crime, and family breakdowns, once thought of as being things of the past, suddenly were on the rise again. The reason? Allens from

This one takes the series in a new direction. one closer to the game's inspiration, the "UFO" TV series

Agents and soldiers have been given a wider range of actions and they are now able to crawl, jump.

climb, and

even swim

another dimension, of course, taking over the minds of unwary citizens. infiltrating key organizations, and generally causing trouble.

X-COM III takes place almost entirely within the city of Megapolis. and adds character interaction to the series signature squad combat. The game is divided into three distinct phases: Investigation, Intrusion, and Irwasion, During Investigation, the player sends out agents to look into any strange occurrences, attempt to determine who's still human and who is an alien puppet, interrogate suspects. recover alien technologies, and try to discover where the aliens' interdimensional gateways are.

If the player is successful at thwarting the aliens' more stealthy. approach, the game switches to Intrusion mode, where the aliens simply opt for a massively aggressive all-out attack. Huge warships fly through the gateway, and it's up to the player to maneuver his forces to stop them. During the final phase, Invasion, the player follows the aliens back into their own dimension to destroy the alien dimensional gate control center and end the threat once and for all. In a nice touch, the allen dimension is generated

at random each time you play.

Most of the action is controlled from the city display, a large isometric view of Megalopolis that is analogous in function to the world display in the previous two games. From here, the player can control where his agents are sent and can get details of alien activity. The player can then zoom into any area. of the city where the traditional X-COM action screens take over.



While the three-quarter view will be familiar to anyone who's played X-COM, X-COM III is presented entirely in 640x480 SVGA mode, giving the player a larger field of view and the graphics a greater level of detail. In addition, agents and soldiers have been given a wider range of actions from the first two games, and they are now able to crawl, jump, climb, and even swim.

provided intense, challenging gameplay through two installment With its significant improvements and additions to structure and form, X-COM III could prove to be the best title of

The X-COM series has





Past! Hey buddy, se any allens? Learn how sniff them out fast, or the human race is toast











Prop Cycle



Re

If here to burst these





Format:	arcade
Publisher:	Namco
Developer:	Namco
elease Date:	September

Origin: Japan he not-so-quiet revolution at Namco is taking the company in many new obvious directions, as well as a few summising ones.

The success of the Tekken and Ridge Racer series fill the former categories well, while games like Alpine Racer and Time Crisis are well more than just nice surprises. They're original concepts. and in the case of Alpine, it was a risk that's now paying off.

Except that now. Namco's newest crop of games, especially Prop Cycle, are more original and bizarre than just about anything presently in the arcades.

Prop Cycle is a funky looking oneplayer contraption, and it's bound to attract people simply because of its odd look. Players sit on what's essentially a bicycle and pedal the propeller-cycle (a kind of hang glider) against time to save a lost city from floating away.

Sound weird? The story is based on a fantastical theme, in which a small, peaceful, technology-fearing

Previously known as a Sega copycat, Namco, reinforces its reputation as an arcade innovator with this new release

village is thrown into chaos when a mysterious and evil character touches the town's sacred alter. Obviously, there's a damned good reason it wasn't supposed to be touched because now the city is floating away. It's your mission to propel - peddling, literally through the sky to save Solitar, the village, from turning into a lost birthday balloon.



heve the potential to luri newcomers to coming

When Next Generation spoke with Namco, there were three levels being worked on, and a fourth, Solitar, which is the finale. By pedaling through the air, popping time-saving balloons. avoiding time-deleting balloons, using some balloons to bounce off of, and maneuvering a path through tunnels. clouds, and other harrying obstacles. you'll be able to beat the time limits and complete the mission, Namco has fixed the "bike" up with some clever flight maneuvers. You're capable of controlling the blke's direction and can fly straight up into the heavens or even pull off 360 degree overhead loops, though it's not certain whether the game will pull players through on rails or if it will be entirely free maying

The Super System 22 board is used here, and will guarantee the solid polygons and texture-maps for which Namco is known. The success of Alpine

Racer, an arcade game that a company like Capcom would never comtenlate making, has enabled the developers at Namco to really cut loose in terms of what's do-able in the arcades. But whether Prop Cycle will be a flop or a wild success isn't as important as Namco's break into creative and original ground.



Heroes of

Might and

looks to have

incorporated

the plot in a

pulls players

Magic II

way that

closer to

the action

onscreen

Heroes of Might and Magic II Coming into what may the best

year for strategy gaming ever, New World Computing seeks to set a new standard in a market of giants

Format: PC CD-ROM Publisher: New World

Computing Developer: New World

Computing Release Date: October

Origin: U.S.

ate last year, New World Computing released its Heroes of Might and Magic. starting what now seems to be a new

trend in the PC world, that of creating an RPG or adventure license and then later using it for strategy oriented sequels. Heroes of Might and Magic turned out, despite what early skeptics predicted, to be more than just a way to squeeze a name for a little more money. In the end, it was one of the best strategy titles of 1995, no small feat

when you consider that the competition include games like Command and Conquer and Warcraft II. Now. New World is stepping out into the arena again with a sequel that's set to deliver a great deal more of what players enjoyed about Heroes of Might and Magic, while trying to present a new atmosphere of adventure and plot evolution that is all its own.



on be seen in a veriety of different levels of effectiveness

From the beginning

players will notice a large change about Heroes of Might and Magic II. An intriquing new starvline explains how the country has become divided, each supporting one of the past regent's two sons. Archibald, who is evil, foul, and ambitious, has taken the crown for himself through intimidation and murder. Now his good brother Roland, who has been pinned for the crimes, seeks to return the crown to its rightful place with a band of loval followers. Players can choose to take the side of either Roland or Archibald, controlling the actions of several the





ere, with the future of the entire kiesdom beegies ie the baloe

land's heroes, and their often supernatural followers.

The game is split up into several different scenarios, differing according to the player's choice of sides and the current warfare situation. As Roland. players will need to convince the populous that the discredited prince was not responsible for the crimes

that were committed in his name, and begin turning the forces of the kingdom to his side. Those who prefer the dark side of adventuring will need to stop the young hero by taking as many towns as possible and preventing further growth of peasant revolt. Although many games are crippled by the intrusion of hard-tofollow storylines into what should be solid gameplay, Heroes of Might and Magic II looks to have incorporated the plot in a way that pulls players closer to the action onscreen.

More than just a new set of scenarios. Heroes of Might and Magic II is a full sequel, offering new terrains for combat, new character options and improvements, as well as a new set of structures in cities and villages. Players will need to learn different tactics for fighting in swamps and deserts, in addition to learning new tricks to increase their chances in snow and Java conditions

As their heroes gain experience, they will begin to improve a set of secondary skills that may help them in these dangerous terrains, or in other areas of army management. Current skills include such variations as snow

movement, which helps a hero's followers get through arctic areas; espionage, which gives a player full knowledge of his opponent's heroes and towns; slege master, which gives players more attacks with their catapult during an assault on home ground; and even good observer, a skill enabling a hero to determine what kind of magic is being used against him. Wandering armies will also be found and, if the hero who finds them has enough charisma, they can be negotiated with, rather than fought, under the right circumstances. These features, along with scores more, promise to add an entirely new dimension to an already solid title, and to give players nearly limitless possibilities



With its release right

around the corner. Heroes of Might and Magic II is up against some stiff competition, Realtime strategy has gained a major foothold in the PC game market, and it's going to take a powerful release to be able to combat titles like Virgin's Z, Westwood's Command and Conquer follow-ups, and the multiplayer version of Looking

Glass' Terra Nova Even so, with its powerful and compelling storyline, enormous depth of gameplay, and crisp fantasy artwork, New World may have a title that can keep gamers glued to their screens one step at a time.



fighting for the crows, adds a great deal to the atmosphere of the ga



Blast Chamber



Although the quelity of these early screees is a little blarry, you one sti get a good feel for the game's gritty Blade Russer style of graphics

laying against a human is always more fun than playing against a computer, and a fourplayer game can increase the amount of

fun exponentially - just look at Super Bomberman II for the Super NES, arguably one of the best games of all time. Now Activision wants in on the action, and the result is Blast Chamber.

There is a one-player game here, but the real fun will come with the addition. of a multi-tap and some friends. The basic concept of the game is simple. Each character has a time bomb

There is a one-player game here, but the real fun will come with the use of a multitap and some friends

> stranged to his or her back. Refore the time runs out and the character explodes, he or she must obtain control of a crystal and place it on a special transmitter (there is one for each player), which will increase the time before the bomb goes off. The last player alive wins. Of course, there are other

Activision hopes to score a major hit with the first nonsports four-player game for PlayStation and Saturn

Format: Saturn.

PlayStation

Publisher: Activision Developer: Activision

Release Date: November Origin: U.S.

nuances - placing the bomb in another player's transmitter decreases their time to detonation, for example.

The game is set in cube-

shaped rooms (40 different single-player levels and 20 multiplayer rooms) crisscrossed with catwalks, traps, rope swings, stairways and other obstacles. The most stunning feature (and one that takes full advantage of PlayStation's

and Saturn's 3D capabilities) is that rooms can be rotated. The ability to rotate the cube adds a

novel strategy element, one we bayen't seen before. While it remains to be seen if the game will help to sell a million multitaps, early versions were refreshingly addictive.









pleyers, expect lots of carsing and shouting on the timer appr

Rayman 2



Reymen feces e new villein, Mister Derk, whose ormy of robote ere bent on turning Reymen's entire plenet into e giest industriel lendscope

Side-scrolling platform games rarely looked or played better than the original Rayman — But can it be topped?

Format: PlayStation, Saturn, PC CD-ROM

Publisher: UBI Soft
Developer: Climax
Release Date: November
Origin: U.S.

Dark, who needs to be hunted down and defeated in order to stop this industrial onslaught. Rayman uses his fists to

stop his enemies, and in Kayaman 2, he gets a new arsenal of pupilistic prolectiles to choose from, including the Fire Fist that travels herizontally, then stansa straight travels herizontally, then stansa straight purpor hit yan divid harans in the air for a short time so Rayman can jump on It; and the Hook Fist, which he can use to graft far-eway platforms and haul himself up, or graft distant items and pull then basic. And, the travel underpreadur, and a drill to travel

Like its predecessor, Rayman 2 looks to break little ground in either design or play mechanics, but simply be a well made and entertaining game that delights players' eyes and thumbs.



Design has strayed from the pure eprite entwork of the original to prerendered characters

Rayman uses

his fists to stop his enemies, and in Rayman 2, he gets a new arsenal of pugilistic projectiles





still in its early stages the cheractere show imagination and floir



contributed nothing new to the genre, it

well, and included enough humor.

was large, colorful, controlled extremely

he original Rayman

lightweight and

enjoyable platform

games available last

year. While it certainly

was one of the more

Unimpressed with the lush vigetation, rolling hills, and glistening candy landscapes, all these assthetically challenged admoids seem to want to do is cover the planet's surface with a flat expanse of iron and steel. Behind this invasion is the evil, invasion is the evil.

mysterious Mister

been invaded by robots

from space.



underground.

As in the original, players can expect lush stage designs the ore placeing to the eye and a challenge to the fingers



ake the worlds leading professional 3D modeling and animation system and completely re-architect it for Windows NT. Use it to squeeze time workstation performance and image quality out of your PC-class budget. That's 3D Studio MAX"—workstation performance on the PC of your choice.

Animation is easy to master in 3D Studio MAX. Just press

the 'Animate' button to animate encything It's not hard to visualize your animation because the realiume shaded viewports give you instant feelback. Every change you ever make can be revised thanks to a unique data history feature. Plus, voluntertic lighting is rudueded for soft and realistic lighting effects. The future of animation is here now, with an intuitive Windows interface, support for graphics

accelerators, multiprocessor PCs, and

Best of all, 3D Studio MAX takes the idea of play-ins to the nort level. Now they are fully integrated with MAX, as if they were standard features. Hundreche of independent developers are already hard at work creating new modelers, particle systems, renderest and special felicity play-ins to gave you endless possibilities for creating new worlds. And look soon for Character Studio" from Kinetix, a revolutionary approach to character animation.

Whether you're a game developer working at home on a Pentium 90 or a post house meeting impossible deadlines for a feature film with a network of multi-

processors, 3D Studio MAX is for you.

From Kinetix
A Division of Autodesk, Inc.
http://www.autodesk.com/kinetix

IRON MAN" AND X-O MANOWAR

The S

MAKING METAL. Over a year in the making and nearing its final stages, Marvel Comics' RION MAN and Valiant Comics X-O MANOWAR appear in HEAV METAL, one of Academ's most ambitious video game endeanors to date. By utilizing the full capabilities of their Motion Capture Studio (the same studio used in the making of the Batman Forever wideo game, and other games such as Frank Thomas Big Hurt Baseball and Alien Tillogy), Academ is bringing IRON MAN and X-O MANOWAR's comic book universes to revolutionary digital life and bringing the metal titlants openfor for the first time.

Located in their Glen Cove, NY headquarters, the Motion Capture Studio is the jewel in the crown of Acclaim's technological

empire. The black rubber stage with its four high-resolution, black-and-white cameras was the scene for the human modeling of HEAVY METAL'S punching, kicking, running, flying, and jumping movements. Captured on film via reflective sensors on actors' black rubber suits, hand-drawn comic art, by veteran artists Bat Seas and Dave Johnson, was wrapped around

the digital framework of the fighting movements. The end result is movement so lifelies, so fluid, you'll be running for cover. The soft treatment was applied to YELTON JACKET, BLACKOUT, ABSORBING MAN, GLAD/ATLON the SPIDER ALIENS and a galaxy of other villains.

Through the use of completely rendered CGI and SGI computer graphics, both the characters and backgrounds have a highly detailed, 3-dimensional appearance. HEAVY METAL takes this revolutionary technology to previously unreachable levels of realism. You'll never look at video games the same way again.



SPARKS WILL FLY Out of all this technology comes the meat of any self-respecting video pame — the pamerplayl From the small but referring denot that I played, I can tell you that IRON MAN /X-O MANDWAR HEAVY METAL delivers. You'll get to rampage your very through seven levels ranging from the RAD lab of Stark Industries to the South American rain forest and the New York subvey (not to mention Arnim Zola's living





BULTS

By Edward Marcus

of it.

castle)—each with its own different environmental effects. But you'll need more than just a quick trigger finger and a hard right cross to make headway in HEAVY METAL. Only by using strategy to complete your missions will you be able to reach the secret final borus level: an apocalyptic, one-on-one bettle between 180M MAN and X-0 MANOWAR!

It's a given that heavy weaponry is a crucial element of IRON MAN/X-O MANOWAR: HEAVY METAL. IRON MAN's arsenal includes Laser and Proton Blasts. Visible Light Beams. Repulsor Blasts, and

Force Fields, white X-0 MANOWAR relies on his ton Cannon, Cellular Disrupters, Iron Sword, Armadillo Mode and Illumination Omni beam. And on top of this fearsome frepower, each metal warrior will be able to punch, jump, speed-run and soar through the danger-laced skies!

FORGING AHEAD IRON MAN has completely new armor exclusive to this game (also featured in the crossover comic book from Maryel and Acclaim).

HEAVY METAL also features full-motion computer animation, similar to the groundbreaking technology featured in the movie, Toy Story, and a hard-driving rock music soundtrack. The game is going to hit **PlayStation**," **Saturn**," **Windows**® **95 Game Boy**® and **Game Gear**" later this summer.

BOTTOM LINE This game may well set a new standard in Super Hero action video games. Until then, you'll just have to be content to know that IRON MAN / X-0 MANOWAR: HEAVY METAL will be simply the most thrilling, immersive and technologically astonishing game of the year.

Think you can handle that?

DATA FILE:
Theme
Action
Available
Late Summer
Player
1 or 2
% Complete

Developer Realtime Publisher Acclaim





ALL 1-600 771-0772 FOR INFORMATION ON GAME PATRINGS avent Cortics, law May, Yellow Jobber, Blacked, Assorbing Man and Araba Zole and the distinction is beneauses these debreads of Many, Chanacter, fice and the send with permason, O 1995 Mariel Chanadistri, No. Super-Hero is a co HYGO Makenski, All rights reserved. X O Manosas: "3 & 0 1995 Application Combine Inc., Bogs, Genn Gert and Seless as debreads or Glosy Entresposes, Ltd. A Rights instanted, Markholis, Game Bogs and the Christia yeals are implicated made

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Combining that person 3-D shoot emeny action with reverting role praying tenential tenents, stripe becomes the tight came to fuse the spectacular, Dooms engine with an all-consuming interactive multiplace, adventure, through the mouth-place adventure. Through advent character development, so massive levels, over 200 virtual square miles to express the massive levels.

STORVEINE—essential to the Gameplay, you will be those throw a more award with the those through the Order. It libiting your bearing, your wit and of course, an awesome assentation whereous your better represent to fight for the truth, as your vigilant.

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"Strife makes the story integral to the gameplay."

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61996 Velocity.¹¹⁴ All Rights Reserved, Velocity.¹¹⁴ and State¹¹⁴ are trademarks of Velocity Inc. This product contains software code owned by let Software Inc. (the "let Opde"), let Code 61993, 1966 let Software. 7th Level puts the finishing touches on a long overdue title that could spell a profitable new take on the future

G-Nome

Format: Windows 95 Publisher: 7th Level Developer: 7th Level Release Date: July

Origin: U.S.

ond strategies. Understending your machine is one of the ker to victory. The gome mekes full use of a Windows environm

Players get behind the controls of futuristic vehicles and are challenged by action sequences that fall within the

most projects, but as G-Nome nears completion, it seems to be proof of the adage, "that which does not kill me makes me stronger."

history for a game that is still in early development. Originally shown as conceptual video footage at the Merit booth at the Consumer Electronics Show show in the summer of 1994. G-Nome has managed to survive through both Merit's financial hard times and the acquisition of its developer, Distant Thunder, by 7th Level. All of this motion would have killed

Nome has had a long

G-Nome is an unusual adventure game that takes players through a story. But unlike the point-and-click

atmosphere of King's Quest or Myst. players get behind the controls of futuristic vehicles and are challenged by action sequences along the plotline. The team has decided to go with a

full Windows 95 environment that G-Name's Producer Todd Parter feels has given the game a solid advantage, "It's a real time, 3D, texture-mapped, polygon game," says Porter. "We're getting benchmarks that are just Incredible right now. We're already a Windows-based company, so working with Direct Draw and Direct Access was a no-brainer. We did the Direct Access in October and what we saw was an immediate increase in speed. Another great thing about it is that we can play in any resolution, 320x200 all of the way to 1280x1024."

With an upcoming realtime strategy game, Dominion, that's based on the same battling robots game world, 7th Level is creating a truly impressive license that it should be able to use for years, Combined with G-Nome's 24 gameplay variations, abundant weaponry, and different 'bots to choose from, and you've got a game that may be able to offer adventure fans more absorbing play than they're used to, while at the same time offering action fans a more cranial challenge.





plotline





When you've got Sega Saturn's triple 32-bit processing power NOTHING ELSE MATTERS.

to time for distractions when you're deep into Sega Saturn, oest body money can buy. SO WHAT! T check out those screen shots. Ba-dah-boom, ba-dah-bing, know what I mean? She's got blonde hair, blue eyes and

ou want curves? Try Sega Rally! Want a thrill? Panzer Dragoon II Zwei. Want a real knockout? Check out Virtua Fighter II. And lots of other incredibly cool games you can play on Saturn. But don't be fooled. Sega Saturn games offer more than just great looks. Like three en if you're alone). Saturn's triple al action, HEAD FOR SATURN. ocessing power means better gameplay and better graphics. So if you're looking for 32-bit processors (that's two more than Playstation , if you're scoring at home

SEGA SATURN





Last **Bronx**

The competitive forces within Sega are now in high gear as AM3 lands a stunning new fighter in AM2 territory



short clubs ere just e few of the weepons evallable

One of the few near complete levels, based on the Shibuye or Tokyo, These well-ermed street punks aren't massing around

> Format: arcade Publisher: Sega Developer: Sega AM3 Release Date: July Origin: Japan

he Sega AM3 division

somewhat of a brazen

upstart with each and

every surprising new

title it creates. Sega.

has proved to be

technology. the core of Last Bronx is a mix of one-on-one Chinese-style

Based on

fighting and

combat

weapon-based

Model 2

Rally, the phenomenal off-road driving simulation, Virtual On, and Manx TT Super Bike are all titles developed by AM3. Increasingly, the team is stepping into AM2 territory, especially with its newest and first fighting arcade title. With Last Bronx, the team may steal the spotlight from Yu Suzuki's AM2, by giving the Model 2 board its last hurrah.

Based on Model 2 technology, the core of the game is a mix of one-on-one Chinese-style fighting and weapon-based combat. Players can choose which "team" they want to be on at the start; choices include skaters, ladies, bozosuka. (Hell's Angels), gurentai (hopdlums). teamers (those who prefer baggy pants), and others. The players' fighting styles range from Judo to Alkido and weapons range from billy

clubs to nunchakus, etc. Though Last Bronx is named after the rough, urban New York setting, most of the flohting scenes take place in various Tokyo hangouts, places known for their street fighting gangs and those places popular with younger hipper crowds. (In fact, the

only known level, the Shibuya, takes place on the Shibuya crossing in front of building 109.) The blend of martial arts fighting

with the use of hand weapons makes this title interesting, especially given the attention to detail and strong gameplay AM3 titles have received in the recent past. And just as Virtua Fighter set a tone with clean-cut fighters like Pai. Jacky, and Lau, Last Bronx has created its own particular tone. It's filled with long-haired thugs, tattooed punks, and leather-clad bikers, a strain of folk AM3 seems to feel should be better represented in the arcades





tht for e fling in the el perkins serase





est motion capture uses real people. AM3 used e doll named "Capch

Killing **Zone**



s of Killing Zoes are able to pull off a sun ial moves, including a special class of immobilizing moves

Format: PlayStation Publisher: Naxat

Developer: Naxat Release Date: June (Japan) Origin: Japan

n a videogame landscape increasingly flooded with Virtua Fighter-inspired 3D brawlers, Naxat of Japan has one title in the works that stands out. It's not the

overall structure that makes Killing Zone unique - players can choose from among eight characters who fight oneon-one in an arena while the camera sweeps and pans around them; standard fighting game fare. Rather, it's the choice of characters and game mechanics that make it unique; each character is based on a classic monster.

Players can choose from a vampire (the so-called "Dark Faerle"), minotaur, cyclops, gorgon, skeleton, the Frankerstein monster, the mummy, and a single human character, who just happens to be able to transform into a werewolf. While this might seem inviting

Naxat of Japan tries to pull off the first three-dimensional fighting game with teeth - and claws, and spines, and gallons of flowing ichor



noters become stronger end/or faster with each victory

enough on its own, the game also boasts a number of other rather unique features. For instance, as each character wins matches and progresses through the game, he or she is "leveled up,"

As each character wins matches and progresses through the game, he or she grows stronger, faster, or both

becoming either stronger, faster, or both. The exact pattern of bonuses depends on the character chosen, and each character follows its own path, enabling the monsters to mutate into increasingly ferocious forms and do ever more impressive special moves

While the Death Tournament is what will interest most players, Killing Zone also includes an "auto-mode," in which players can choose one of the eight monsters, then choose from a list of 16



ters from boll





sic moesters against one coof

The werewolf chooges during the course of the game, going from a nor hoppy humon in camouflage pants to a massive, fur-covered nightmare

Blood will flow, and Naxat is currently planning to include dismemberment during matches

optional body parts that confer additional powers, and set their custom monsters loose in an automated version of the Death Tournament, Players won't be able to control their monster in this mode, but they will be able to see how well a monster performs with the



mmy is ee uedeed creature, he or she shoulde't heve much left

powers they've chosen for it, and how those powers mutate and change as the monster gains levels (assuming the thing survives), they can then save the results to memory cartridge so it can square off against other monsters created by other players.

Finally, as befits a game populated by blood-thirsty creatures of the night, Killing Zone should be strong on the gore factor - Sony's censors willing. Many characters use weapons, even the ones who don't carry an array of claws, fangs, horns, and other nasty equipment, Blood will flow, and Naxat is currently planning to include dismemberment during matches, as combatants lose various parts of their body through enemy action. How this might affect later matches still isn't clear, and this feature may simply be rolled into some kind of finishing move system by the time the game is complete. In any case, Killing Zone would still come a close second to Midway's arcade brawler War Gods as the first 3D fighting game to include gore, and certainly the first

So far, what Next Generation has seen of the graphics left a little to be desired - the animation was somewhat choppy, and characters would occasionally pass through each other. However, at press time the game was far from complete, and Naxat was working feverishly to bring the graphics and game play up to the level of Namco's Battle Arena Toshinden, We wish them luck with this unique and extremely promising brawler.

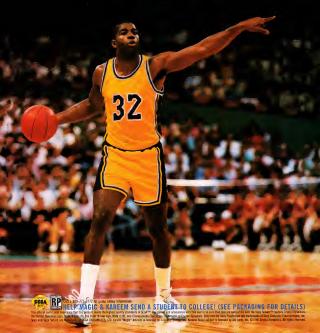
for a home console.













GAME HE CLOCK S TOKING

DOWN

THE NO-LOOK PASS. THE SKY HOOK TO BEAT THE BUZZER. MORE THAN A SIGNATURE ON A BOX, IT'S A LICENSE TO DOMINATE.



It's Showtime! Slam 'N Jam '96 featuring Magic and Kareem

brings you the same net-melting offense that culminated in five

championship rings. Set a bruising pick and run Magic and Kareem's patented no-look alley-oop.

You got hops? Clear the lane and challenge Kareem to a high jumping contest. Or call for a double-team,

all controlled with the squeeze of a plastic button. With their signature moves, you'll get nothing less

than in-your-face basketball. And see it all from the 3D "fastbreak"

perspective Crystal Dynamics' Championship Sports brings to the

hardwood, And that "agony of defeat" feeling? It's natural, Walk It Off.".



DYNAMICS

120 300 120 PC 126

126 Arcade

129

129 Neo-Geo

129

129 Genesis

Super NES

Virtual Boy

Macintosh

Next Generation's. Every month we put

her a band of experts

and ask them what they think

d) games available. He

know how we felt about this

awlessly executed; a new

A high-quality and inventive new game. Either a step

forward for an existing genre or a successful attempt at

**** Revolutio

illiantly concel

**** Excellent

reating a new one

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s competent: certainly

ly flawed in design or

ly chart to let you

about the hottest (and most

Alien Trilogy PlayStation Silverload PlayStation Iron Storm Saturn Worms Saturn Cyberia 3DO Ripper PC Wing Commander IV: the Price of Freedom PC Mario RPG Super NES Street Fighter Alpha II Arcade

Reviews: the good, the bad, and the ugly

114 PlayStation **PlayStation** 117 Saturn



Romance of the Three Kingdoms IV

Koei is known for its sprawling and in-depth historical simulations, and Romance of the Three Kingdoms IV is the product of years of refinement to one of the most complex game engines ever devised. This is both a blessing and a curse. A blessing because, if you're a fan of this kind of game (and as we've stated before. Koei deserves every fan it

series, then pick up any of the

Super NES version of this game in PlayStation version isn't materially menus, the game isn't compatible with the PlayStation mouse (while

There are six historical scenarios to play out, and some 450 officers you can try to ruit, each with their own stats. Talents * like being especially the weather and even throw



like its first, with strong deep play

sher: Koel Developer: Koei

has), they don't get much better. It's a curse, however, for

those of us who are fans and who cen't help but feel the need for something, well, different. Play any of the Nobunaga's Ambition Romance games, and you'd be hard pressed to tell them apart

Next Generation reverwed the August of last year, and the different. The graphics are sharper, the soundtrack is a little more lush, and despite complex the PC version does). Otherwise gameplay is the same.

Each officer also has one or more of the game's 24 "Special good at spying or commanding cavalry, although the talent list also includes the ability to affect lightning (oooh, real historical)

PlayStation

MOTHERLODE



Publisher: Vic Tokal

Developer: Millennium Interactive Although at Next Generation we'd prefer to see games that aren't like anything ever seen before, we're almost as happy to get our hands on a game that, while following a genre's conventions, simply does everything smashingly well. Silverbad, a graphic adventure that blends a horror story with a Western setting, falls into the latter category, putting as strong an

emphasis on quality as it does on action and chills. From the very opening scenes, Silverload is one of the best looking graphic adventures to come along in a while for any platform, much less a console like PlayStation. The graphics, a mix of detailed, hand-drawn backgrounds and painted-over digitized actors, give even the relatively "normal" scenes in the game a strange, ethereal glow. The character designs rarely stray from Western stereotypes, but they're well realized, and creeny as hell.

If the game has a flaw, it's the interface, which is icon and "hot-spot" based. The control pad moves the cursor between areas of the screen where you can do something, but reaching certain active areas or getting from the screen to your inventory bar is sometimes a hit or-miss affair. The game is compatible with the Sony mouse, but unlike the PlayStation version of X-COM. it doesn't help

There's been a number of horror-themed games recently, and while very few have actually instilled any real terror in the player, Silverload manages more than a few chills. Because it's a graphic adventure - and a fairly linear one at that - the constant need to go over the same ground again and again while looking for something you missed does dissipate the terror, but the game still generates a creepy enough atmosphere so that when you reach a point where something pops out at you, you jump. Also, for a change, most of the CD-supplied dialogue is actually well written, even if the faux Clint Eastwood voice of the game's hero is kind of cheesy.

Silverload may not do anything new - even the action sequences are the kind of track-based, first-person shooters you've seen before -- but it's got challenge, incredible graphics, gore, and chills. It's great stuff.

Rating: ****

Mil Beame me with you madrine. FROM POWER ath your machine fen COMING SUMMER 199.6 must have total concontration

The Ultimate over \$20,00000 Gaming Rig!! IN PRIZES!



have the POWER. In this contest you don't rely on the luck of-the You determine if you win or not. You win by outscoring others in a game of Can you solve the grazzle below? Then you have what it skeet. It looks simple, so only the start. Each of five more puzzles gets a little harder. But this time it's a to you. Stay in to the end with the highest score and the gear is yours. whatever options you want. Oo you have what it takes? Then play to win! rter Contest. Win a blazing fast computer r, 16 meg. ram, 1.2 Gig. hard drive, CD-ROM, 17" mor Game Contest. Play on the hi-tech cutting edge with this line-up: laystation; Sega Saturn; Virtual Boy; 300; and Atan Jaguar. Get all five or te ones you don't want for CASH! Bonus options include: 33 inch monitor, ngames, cash, accessories and more!

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Directions. Fill in the Mystery Word Grid with words going across that spel out the Mystery Word down the side. Hint use the Mystery Word Clue.

out on mysely year down the state, must see on waspery year old.

In the future. There will be four more puzzles at \$200 each and one tilbranker at \$100 which will be sent to you by mail. You will have 3 weeks to solve
each puzzle. We doed it know how many will play that typically \$5% will have the
highest soon possible score to Plasse I, \$5% to Plasse II, \$5% to Plass III and \$2% to
Plass III and \$2% to
place IV. The lie-bracker determines the vinner. If players are still ind they will
split the value of the grand pitze they are playing for.

н E P NC н W R ₩0×0 s

WORD	LIST and LI	TTER CODE	chart
PINCHW	PRESSK	BLASTA	WRECK
BREAKZ	PUNCHS	SPRAYC	TURBO
STOMPT	STANDR	PRESSE	DREAM
CRUSHI	SCOREH	SLANTL	CHASE

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PlayStation



It may not be the first Doom-style shooter to faatura H.R. Gister'e ellene, but Allen Trilogy is easily the best

RIPLEY, BELIEVE IT OR NOT...

Alien Trilogy

first-person shooters available

Developer Probe
Back in the day, Acclaim and Probe released Allen 3 for Super
NES, one of the batter side-scrolling, licensed games Acclaim
ever published. Now here we are, three years latter, and the
team of Acclaim and Probe (which is now a wholly-wined
development house of Acclaim) have come up with Allen Trillingy—
and to no suprise, the game is one of the better Doomshite.

First, you'll need to get by the into sequence's excellent percendered 30 similation. Though we've seen it is every trade shaw for two years, Acclaim's motion-cepture work smooths out the transition from intro to game, and is one of the best intros we've seen. You're then dropped straight into the heart of a semomorph-indeed colony of the Weignard-Vistan comparation to blast allen crittens (and infected colonists — not sure about the morality of this, but hely, get the various readilities up and

running again, and generally make the place safe for maskind. The game is motherized see, if engine, overly families, and The game is motherized see, if engine, overly families, and foldstate, however, are what make this come alter, face huggers could ever, face for maskind the count form above, after outside see, face for tages of the country of th

Which doesn't mean it's perfect. Uke PlayStation's other Doornskip same this morth, PO-24, Alea Things grafter a sittle from being overdesigned. Merry of the level layouts are midigly confusing, and the map screen is too sketchy on distals to be much help. It's possible this was deliberately done to extend the life of the game because compared to, say, Doom for PlayStation (or even PO'ed, there aren't many stages have. The fact is that These are releasively minor pollopems though. The fact is that

the Aller movies are just about the perfect scenario for a firstperson shooter like this, and the designers have done their job extremely well. The 3D engine is first rate, the action is intense, and the control couldn't be much smoother. Nicely done.

Rating: ****

The game is amazingly considered and before and requires varied and before and the state of the



Sidewindar may be the best flight game for PlayStation to feature authentic craft, but it's not great

Sidewinder Publisher: Aemik (Jepan)

Developer: Pegasus When you consider that the only other flight, sim-sin games available for PlayStation are the so-so Air Combat and the less-tien-so-so Ajelle Marrior, It's tempting to give Sidewinder more prises than It deserves. Somehow though, that doesn't seem like a good enough reason, especially when compared to Warhawik, which wasn't this style of game

but flew like a dream Still, Sidewinder has a lot soing for It. The missions are plentiful and varied (the briefings but the graphic representation makes everything clear enough so you don't need to know what's being said), incorporating a nice mix of air-to-air and air-to-ground assaults. The graphics are impressive with just a little drawin (the game is structured so you rarely notice it unless you're attacking a large ground target). And the game is challenging without being too frustrating.

The flight engine, however, doesn't respond like a real plane at all. It doesn't even follow arcade style flight characteristics — you can't roll the plane, and you can't even dip the nose unless the wings are nearly level, which means it's difficult to slow a turn, or lower your aim during a turn. After a few missions you get used to it, sort of, but it's

counter-intuitive and annoying.

If the game had just controlled better it might have rated a ster higher. As it is, it just doesn't suck.

Rating: ***

Saturn

Earthworm Jim 2

Publisher: Playmates
Develapar: Shiwy Estartainment
The popular sids, vertical, and
sometris-ceroling action, game
from the world of 15 bit has finally
and in to 32 bit. Earthworn. Min
2 was released a few months ago
on Genesia and Super NES, and
when runners started flying about
a Saltum-vision of the game,
have the started properties of the properties
proposed for a 30 matation of this
hairsup solitories. What Saltum
womens will get is a close
trenstation of the 5bit game.

The fact of the matter remains that EJ 2 is a great 2D game, and though it's fashionable to dismiss 2D as yesterday's development constraint, the title is amazingly fun even on a machine designed for 3D samins.

There are some enhancements over the 1.0 bit versions of £1.2. Most of the these, however, come by way of an expanded color palette, and an expanded color palette, and an expanded solor palette, and solor palette, and solor palette, and the solor pale

If you've spent your eagerness over £1 2 on a 16 bit console, the Saturn version is not likely to do much for the life of the game. If you've not pleyed this wild and quirky little action title, it's well worth checking out. Rating: ***



Outside of a few graphic upgrades, Earthworm Jim 2 for Saturn is like the 16-bit varsio

Night Warriors: Dark Stalker's Revenge Publisher: Cepcom Developer: Cepcom

In case you didn't know it already, Capcom makes the best 2D fighters in the industry. And despite the advance and growth in popularity of 3D fighters, gamers just can't get enough of Capcom's games. Nonetheless, the downside of Capcom's

Saturn

HOOKED

Rating: ***

Publisher: Ocean Developer: Team 17

Upon first inspection, the whimsical battle game Worms bears a striking resemblance to the famed Lemmings. When it comes to playing the game

however, the experience is much closer to Cannon Folder with worms. Beyond the obvious influences, what is also found here is a simple charm that only shows itself in a handful of titles. It's the kind of game that makes no excuses for its lack of texture mapped polygons or its minimalistic gameplay.

Worms is a fun game with an infectious spirit and near endless replay value. The idea is simple. Through the use of various weapons or tools you must eliminate a competing team of worms before they put an end to your efforts. To be successful, it will require equal parts strategy and skill, making this a better-rounded game than most

nonworm titles What's finally so appealing about Worms is the fact that the game is so perfectly designed for head-to-head play. In fact, there is an option that enables up to four players to compete simultaneously for final worm

domination. Another spectacular element of gameplay is the spontaneously generated landscapes. Sure, the playing fields are simplistic by today's 32-bit standards, but what other game makes up its vironments on the fly? This game is great fun.

only helf the fun. The Uzi is the other helf





lust datalled enough to make them challenging

Rating: ***



se trief-and-error process. Helen-Ko goes in for a little trimming

successful line of 2D fighters, including the Street Fighter series, X-Men, and the Dark Stalkers series, is that the games are all suspiciously similar. What sets Night Warriors apart from its cousins, however, is the gothic character design and the consequent moves. While the moves and characters in Street

Fighter are at least loosely based on humans and human qualities (please don't write in asking about fireballs), those in Night What's fun about Night

Warriors are a much wilder bunch. Warriors is the fact that anything can happen. The success of the series lies in the fact that each character has a host of twisted

maneuvers that take the action to all sorts of extremes, and yet that wonderful chess-like strategy element is still perfectly

applicable to the game Strategy aside, what Night Warners does share with other Capcom fighters is the same onsp and responsive control that makes players appreciate the impeccable animation more than ever

Rating ***

Shining Wisdom **Publisher: Working Designs** Developer: Sonic! Softwore

Through the deluge of games released for the 32-bit systems. the always-popular RPG genre has remained somewhat neglected. As one of the first RPGs for the nextgeneration systems, Working Designs' Shining Wisdom sadly falls short of 32-bit graphic and gameplaying expectations.

The problem with Shining Wisdom is that its graphics and gameniay seem more like an evolution rather than a revolution in the same form from the 16-bit platforms. Graphics are sharper on Saturn, but for the most part what gamers get are the same old "superdeformed" guys running around fighting monsters and

picking up items. Other than the rich soundtrack, there is no attempt to use any of the available 32-bit power

But Shining Wisdom isn't a total loss. In fact, if it were a 16-bit title, it would compare cuite foundably to most PRGs. The game features a long, involved storvline, a variety of lands to explore, and high play value. For the most part, traditional RPG fans will find Strining Wisdom a satisfying game experience. It's not groundbreaking by any means. but it will do until the 32-bit RPG revolution really begins.



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Saturn

STORMIN'





om its stunning intro quancas to the exceptional ima Al and raptay value, irow form sets new benchmarks for a thing strength in orders

Iron Storm

Publisher: Working Designs Developer: Sega of Japan

In a gene that traditionally boasts a small cutfiles following at the best, ron Storm expands the appeal of the simulation game with resistine, 30 polygon rendering that provides the gamer with a visional payoff for each strategic must. The sight of a sousidion of Shikas decimating a tank column certainly adds life to what so often proceeds as "dry" gener. After a few perfunctiony viewings, however, a said reality settles in and the graphics become merely anonying as gamerys slows to a creval in order

to accommodate them.
Fortunately, these animated scenes can be turned off
Fortunately, these animated scenes can be turned off
produced scenes.
Fortunately, these animated scenes can be turned off
based stretchy war game. In on Storm proves to be addicting and
challenging forgonize the extreme connection of, for examine,
FD if from Koal, repissing as with a more straightforward
(producingly all that were evaluate) in WWIII, 50 hastonic battles
in both the Pacific and European theaters of operation—and
for Storm provise with the best of its stategic companions.

Rating: ****

3D0

Cyberdillo

Publisher: Panasonic Developer: Pixel Technologies Copying Doom has been the fashionable trend over the last couple of years, but OpherMilo takes a new angle on the Doomclone with a Doom-spoot. Ptayers roam through a set of pixely hallways and several weind levels as an armadillo pocking a plunger gun. Starting in the infamous "Disco Land" and going on to a place where walking hot dogs are the norm may sound interesting to some, but in reality Cyberdillo just doesn't out it.

Plunging your way through each ridicalustly bright (to the point of bilindness) level, you are faced with trying to find a way out of the maze while taking out odd enemies fike laws lamps and hair spray cars. CyberdNib isn't about sawing the world or even fixing backed up tollets, it's simply: find



Cyberdillo's trippy hallways and bad disco are good for flashbacks but the gamopley lan't there

four unusual items and get out. Predictably, there are the usual bosses like Barfman, TV Man, Melon Fish, and Dumpmelster (OK, maybe they're not so usual), who you'll need to crush to get to the end.

crush to get to the early Although Opberdiffo moves surprisingly fast on 3DO, the control is very loose and the graphics are far from outling edge. The devolopers deserve credit for trying to make credit for trying to make movel, Operation is either a cute novelty or a runof the mill Doon game — neither of which make for much long-term entertainment. Rating: **



Cyberia's hell-wandaring scense look swesome, but a restrictive choice of paths limits gamapley

Cyberia Publisher: Interplay Developer: Xatrix Entertalment

The well-traveled Cyberia makes a stop on its fourth videogame pleatform (PC, PlayStation, Saturn, and now 3DO) and delivers a product that is exactly file the other three versions. While theirs not such good news for those who have already played the game, 3DO owners who haven't played this one are in for a nice supprise.

Graphically, the game is superb. The sick, rendered graphics in the intro sequences, which normally leave the player feeling slighted when the game which normally leave the player feeling slighted when the game ordisables in the "gameolay" And the game's use of multiple camerangies, an either soundtrade, detailed light-sourcing, and short, effective cut-scenes actually make the player feel as if he or science slighting mayer.

Unfortunately, along with that modion picture feeling comes the reality of having to follow a script. The linear gameptay doesn't permit wandering or adventuring. The entre game is on a track that constantly pulls you back to what you want to have a supposed or the pull of the pull

adventure, the gameplay here is based on repetitious and annoying trial and error methods. Creating your own story is the ideal graphic adventure and Oyber's doesn't come any closer to that left graph but the same.

Cyberia doesn't come any closer to that lefty goal, but the game pushes the established limits of the genre to their max. It's worth taking a look at.

Rating: ***

PC



Ailled General is a good update but not satisfying as a sequal

Allied General

Publisher: Mindscape Developer: SSI

Panzer General was one of the best-loved war games of last year, and Alleed General is an improvement on an already great engine. For a sequel to such a preatigious title, however, there's really not much new here. This time, the game runs

solely under Windows (3.1 and 095). As a result, you can do Windows-like things with it: have several different windows open, change resolutions (up to 10.24x/68) and hide it in the background when the background with the background with the background with plays with playses of your opponents with playses of your opponents of the playses of your playses of yo

On the other hand, the Al still isn't sharp, and expect to see some chesting on the computer's part. It's still a solid war game, and although we will have to wait for Parzer General II for the real improvements, this should be enough to tide any wargamer over, as feast for now. Rating: ****

a country of fictitious ones

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PC CD-ROM

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w.magicgames.com

Developed by:

Holy Mackerel Media





Published By:



JACK'S BACK

Publisher: Teke 2 Interactive Developer: Take 2 Interective

Ripper is one of those games that can't seem to make up its mind. One minute the same helieves it's a graphic adventure, the next it's a movie. and the next it's a puzzle game. If any one of these aspects would be perfected, it could be a gamer's delight. As it stands, the game is mediacre in each category

in the year 2040 a series of mysterious, gruesome murders have taken place. The player assumes the persona of Jake Quinlan, an investigative reporter for the Virtual Herald. The killer has a tendency to send Jake messages after the murders, and when Jake's love interest is put into a coma by the self-styled Ripper, he starts hunting the killer,

From 11th Hour-style sliding tile interactions, to action sequences in which the speed with which you move your mouse will determine whether or not you'll access important information, the game is full of puzzles. As an interactive movie, it has some big-name stars, from Christopher Walken (Pulp Fiction, Deer Hunter) to T.V.'s Jimmy Walker ("Good Times"), but the roles they play are so overdone it's just plain funny

The 3D rendered backgrounds are impressive, but moving through them can be about as quick as a snail on depressants. There's no way to bypass the several firstperson movement scenes, so when you so back to retrace your footsteps, you'll see the same thing over and over.

When all is said and done. Rioper has the potential to be a great game, but it simply doesn't live up to expectations. And that's the disappointing part, considering the game has a great story and beautiful graphics.



be covered with their own blood This is the kind of hysteris th drives the storylins (top stween puzz cenes (inset)

This duy is the co - you can tall by his furnit



Rating: ***

a whole lot of fun. This is shout all there is to CyberSpeed

CyberSpeed

Publisher: Mindscepe, Inc. Developer: Mindscepe, Inc.

If you want a game that requires a mainframe computer to run smoothly, has about as much control as a 747 with no steering voke, and looks as good as Rosanne in a bikini, this is it.

This is supposed to be racing in the future, but it's more like the future of torture. The ships you fly are connected to a laser tether that runs around a track, and the only skill involved in racing is trying to figure out when to spin your ship around in circles. and when to hit the turbo button The game is so unchallenging that if you let your pet dog Stinky at the controller, it may have a good chance of beating you. As for system regulrements, if

you have anything less than a Pentium 90, abandon all hope, ye who purchase here. The graphics are drab, and, with only a few exceptions, the tracks are uninspired. The only winning grace between races, and those are more ridiculous than funny. If you want a racing sim, check out Whiplash and avoid CyberSpeed like, well. Rosanne in a bikini,

Rating: 4

Descent II

Publisher: Interpley Developer: Parellax Softwere When it comes to sequels, few can boast the improvements like those made on Descent II. This one takes all the action and excitement of Descent, puts it in high-resolution graphics (up to 800x600), throws in some FMV



footage to tie it all together in a

coherent plot that doesn't

mepley, wespons, and enemi st made the first so damn go

interfere with the gameplay, and finishes it off with a bunch of new weapons, items, and enemies, The storyline follows up on the first title - the mercenary

you control is sent on yet another errand for the meda-mining corporation PTMC. Your job is to make use of the hot new weapons to battle the ugly new enemies. Some of the new items include the blinding flash missile, the smart missile (a guided missile that you're able to controll, and even a guide-bot that will lead you to the next goal.

There's even a new missile view, enabling you to see where it's headed in a small window. The high-res graphics are light-years ahead of its predecessor, and if you play on a Pentium, the game flow is silky smooth, even with the highest detail The dame is still not perfect.

Control can be a bit shaky at times, and there are plenty of pauses when the game loads the next track of redbook audio off the CD. You can shut the CD music off, though it still sounds much better with it on. And, realistically, the game still has the same motif - find the key. open the door, blow up the reactor, get out. Considering the improvements, however, that's perfectly all right. Rating: ****



The 800x600 3D mode msy not be hest in Hyper 3-D Pinball, but it sure is pretty

Hyper 3-D Pinball Publisher: Virgin Interective

Daveloner: NMS Softwere With the multitudes of pinball sims flooding the market, it's hard to find one that stands above the growd. This game, however shines through like a stick of dynamite in a burning bern

Hyper 3-D Pinhall delivers fast and furious action from a oxelated 320x200 mode to a stunning 800x800. There are a few different angles to look at the table, too: 2D and 3D panning views that only show a portion at a time, and a full 3D view that enables you to see all of the action. All of these include fantastic chotorealistic graphics and, with seven tables, the game provides a variety of challenges to keep any pinball wizard happy.

The only real elements that

"Hey Pad, what video games did you play in the olden days?"



"Son, I remember walking through snow 10 feet high just to get to the arcade. In those days the games were only a quarter and Duran Duran was always on the radio. Me and my buddys would play until they kicked us out, then we would go to our favorite pizza place"...

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DĖJA VU



The good guy and the bad guy. Now, can you guess who is who?

Wing Commander IV: The Price of Freedom Publisher Origin Systems

Developer: Origin Systems If you loved Wing Commander III, you'll love this new version, Because that's what this is, a new version of an old title Of course, this version had a bigger budget; \$10 million to be exact. The special effects are spectacular, the acting superb.

and the story gnpping. But as a game, the kind you play, it's the exact same thing as WC III. That's not a bad thing - WCIII was a great game, and it's nice to get more of the same. But with \$10 million, you'd think the programmers could have optimized the code. They could have added tons of features; replays, multiplayer support, more

ships, or even more interactivity. Players can still choose between two options during movie scenes (the nice-guy response, and the jerk response); and the actual gameplay, which runs on exactly the same engine as WCIII (with only a few improvements), nins almost half as fast at even the lowest resolution - with all the details turned off

Still, if you have the machine to run it, there's a lot of fun to be had here. The missions are varied, from the usual seek-anddestroy flights to reconnaissance, hostage rescues, and even spy insertions. There are several different endings depending on which choices you make throughout the game, enabling more replay value than the earlier game. Additionally, while the movies may be tiresome, they are vastly improved, with 16-bit video and stereo surround-sound making it an impressive experience. It's just too bad more time was spent on the noninteractive portion instead of the game itself.

Rating: ****





Not much has changed about the combat engine, except that there's no cockelt view anymore, and it's about half as fast

keep this title from being nirvana are those that are missing; control of tilt sensitivity, number of balls. and table angles. Although the three views are nice, a full-acreon 2D mode would also have been welcome, too Rating: ****

Rayman

Publisher: Ubi Soft Developer: Ubl Soft If there's one thing the home PC market lacks, it's good platform

action titles like those found on console systems. Rayman is a good example of a console game that has made a wonderful appearance on the PC

The graphics, while cartoonish, are fun to watch and make the play enticing. The speed of the game on a 486 with 8 megabytes of RAM seems to be exactly the same as a Pentium with 16 MBs. Sure, the theme is corny, and it's a rame that seems to be created mostly with console players (usually young boys) in mind, but considering some of the

other options for platform sames

on the PC (Thexder, Pitfall: The

Mayan Adventure), it's a welcome change of page. There are plenty of power-ups, simple puzzles, a multitude of challenges, and Rayman himself. who is charming in his own way You might get the same gaming experience on a 16-bit system, but it's nice to know that you can load up a simplistic game on your PC every now and then, too, For mindless, harmless action on a PC, Rayman definitely delivers. Rating: ***

n'a charming, cart ok and solid but simple ley are welcome on the PC

Space Bucks Publisher: Slerra Developer Sierra With the expeption of

Gazillionaire, there are no real good space-based trading sims on the market. Counting Space

Bucks, well, there's still nothing. Players begin the game after man rediscovers space travel that's faster than light. Traveling to a nearby planet, players open a bid for landing rights, and hope they don't get out-bid by a competitor. If so, bids can be made once more, but that's it, Once you've not landing rights to a planet, you can start sending your cargo ships to it. At about that point, the only choice that can be made is to determine what cango your ships are going to carry. Then you find anothe planet to put a bid on, and repeat

the process again That's about all there is to this game. No cut-throat strategy for undermining the competition's prices, no sabotage of trading outes, no space battles - not even the occasional price war.

There are much better trading sims that don't take place in space, such as Transport Tycoon or Capitalism. If you're yearning for a science fiction trading sim, play High Seas Trader while watching the Star Wars trilogy.

Rating +

Top Gun Publisher: Spectrum Holobyte Developer: Spectrum Holobyte The box reads: "You saw the

movie, Now play it." For the record, the game doesn't entertain like the movie, and it doesn't fly like a F-14 Homet. Top Gun is a lacking flight sim with



Too Gun isn't a true-life aim, but it's got some decent missions

lacking video clips holding together a lame plot The graphics don't come close to other flight sims. Although the high-res cockpit. planes, and views are attractive. the ground is uniformly blocky, with virtually no definition There's a cool virtual cockoit view that enables you to look around, but the instrument panel is an unusable piece of art, so to track the important information, you have to use the standard

At least the missions are aried. Following the movie's plot a bit, you play Maverick. Along with your wingman you fly missions at Top Gun flight school. engaging in mock dogfights with the other students to determine the best of the best. From there you move on to more serious campaigns all over the world

The best feature going for this near-loser is its accommodating network options. It's simple and easy to fly, and you can get eight of your buddles in the air at once. As competent as the multiplayer

rating super nes arcade

aspect is, though, it doesn't make Top Gun a "top game," or enough of a winner to stand out above other, better flight sims. Poting: ++

Whiplash Publisher: Internlay

Developer: Gremlin Intaractive

As racing simulations go, Whiplash isn't the one to get if you're looking for serious realism and simulation depth. If, however, arcade fun and invention is more

your style, you'll like this game. There are several tracks that contain a variety of challenges. from the Tsunami Twister (a iumn that flips your car in a barref-roll - just like James Bond's in Live and Let Die), to a corkscrew that's insanely difficult to

navigate successfully. There are lots of different cars to drive, and, if you play the championship mode, the last race is replayable, and can be captured, spliced, and



ra ara several viawing angles dash, but the best fo control is behind the wheel

saved for posterity or for the more important bragging rights The biggest drawback is the high-res mode. Even on a Pentium

133, it's slow with all the details on. In fact, even with details off the frame rate isn't spectacular. With sood network options

and very entertaining arcade style tracks, it's got a definite edge over similar titles like The Need for Speed or Screamer. Rating ****

Arcade

Funky Head Boxers an Saga

Devaloper: Saga Whether or not Sega's developers couldn't squeeze enough out of the ST-V Titan system to create

round digitized heads, or whether they purposely set out to create big, boxy, digitized heads, they're not saying. But Funky Head Boxers is an unusual boxing game

that packs a few good chuckles. The game is really like waking up in a "Twilight Zone" episode. except instead of turning out a mutant on a martian planet, you.

Super NES

Super NES

PLUMBING DEPTH

Publishar: Nintando Daveloner: Source Soft

As the world anxiously awaits Mario 64 for the elusive N64, Nintendo has entrusted its precious mascot, Mario, to RPG masters and long-time

Nintendo supporters, Squa Soft. The result is Mann RPG a traditional Square Soft BBG with posteredition tendencies. As luck would have it, the elements that stand out from the traditional formula are those that make this a recognizable Mario game

the gameniay of Mario RPG just imagine a title that's about 25% traditional Mario action game combined with 75% RPG,

and held together by the strength of its characters and

What fun would a Mario game be, after all, without some hint of running, jumping, and wacky humor? To get a good idea for

ets as wall as Mario actic aplay, Nintando's naw Mario RPG hing in it for avaryona

As was expected from the quality-driven companies involved in creating Mario RPG, the game is chock full of beautifully rendered graphics, top-notch sound effects, and plenty of genuinely furny Mario humor. The game also employs some clever little twists and challenging puzzles as the enormous world of Mario is slowly revealed throughout the game. What's perhaps most important about the game, however, is the alluring nature of the characters and the bizarre storyline as it continues to develop with new characters and plot twists.

Successfully blending action elements with a reasonably complex storyline and battle strategies, Many RPG is the perfect introduction to the world of RPGs. While it would be impossible to successfully argue that Mario RPG maintains the complexity of most RPGs, it is deep enough to command the concentration of even the most seasoned RPG fan. On the other hand, it's not so difficult as to alienate non-RPG fans. Thanks to the consideration given to both genres (a rare feat), Mario RPG is truly an attractive title for most gamers.

Rating: ****

well-developed world



selv 'non Gook 'non Dobote Inst got a new lease on life in the odd boxing same Funky Head Boxers

and everyone around you - your opponents, the ref, the entire audience - has overly large craniums shaped like blocks of Tillamook cheese. A one-player game, Funky enables you to perform standard boxing moves jabs, uppercuts, roundhouses, hooks - as well as supernatural ones. like helicopter spins, flying double-fisted combos, or medation hooks which are entertaining

when they land. You fight six somewhat balanced opponents and then battle the heavweight champ for the title; players can win or lose automatically after three knockdowns, or after a really sound beating. Each no name boxer head is digitized, and the boxers weave and sway back and forth, especially when they're going down. Toggle the joystick and press buttons to raise your health meter after a knockout and you recover, but beware, the action is slow, and boxers don't always react on-time with your commands. Also, after the second knockdown, you're more susceptible to getting the living

daylights beaten out of you Maybe the best quality about this title is the range of expressions on the fighters when they're hit. When a swing is blocked, a fighter will grind his teeth; when hit smart and hard, his eyes will bulge, he'll pucker

his cheeks out, and tears or stars will appear on his eyes. Having said that. Funky Head Boxers is one hizarro title. It's a decent especially for what's hyped as a hot, new arcade system. Rating: **

NBA Hangtime Publisher: Williams Bally/Midway Daveloper: Will

Bally/Midway Well, whatever happened to Midway's license with NBA Jam. it didn't seem to have any affect on the look, feel, or play of its new

haskethall title at all, NRA Hangtime has all the playable qualities of NBA Jam, plus a slew of perks that make this worthy of your arcade quarters

The overall "new" game is studded with fittle extras built around the NBA Jam core game. Double dunks, a trivia quiz in

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NEXT GENERATION

Arcade



es, but still the best ground. The mighty 16-year-old favorite Sekure sends a mushroom burst at return character Don

2D OR NOT 2D?

Street Fighter Alpha II

Publisher: Cepcom Developer: Cepcon

The Longest Ongoing Arcade Series Award goes, without a doubt, to Capcom. Because now there are nine, count them, nine Street Fighter titles to have hit the aroade floors without the company ever reaching that taboo number, three While at first glance this Street Fighter Alpha II looks just

like Street Fighter Alpha, it's different. But you have to go out of your way to find the biggest change, the Custom Combo, an unprecedented, new, and complex innovation in Street Fighter gameplay. It works like this: Once you've attained enough power on the Power Meter, hit any three buttons by forming a triangle, and you'll be able to "program" a personal combination. You can set if from one to three seconds, and depending on the speed of your character, a lot of moves can be built in. Weirdly, the programming is a first-in-first-out method, in which once activated, you execute your moves and they are performed in hyper-fast speed one after another while you're executing the next moves. You're vulnerable while "programming," too, and it's important to get in the first hit because just like a Super Combo, you'll have your energy sapped if you're hit first. In addition to this feature are three new characters, Gen.

Sakura, and Rolento, totaling a wholesome 18 characters for the same, the most of any SF title yet (Super Street Fighter 2 takes second place with 12 playable characters, four bosses). Gen, an old master created in the likeness of Virtua Fighter 2's Shun-Di, is able to switch fighting styles (Mantis to Crane) in the middle of fighting; Sakura, who may be one of the cooles and most popular characters, is a young school girl dressed in high socks and short skirt; and Rolento, a military fanatic, who's armed with nunchakus and is capable of hurling knives

Besides a fresh set of backgrounds - including one backalley scene in which your characters step in puddles that splash about their legs, and where simple but effective shadows are produced - the only other new feature is that you're already set in Turbo mode, enabling slightly quicker moves, jumps, and overall movement

Of course, all of the standard Capcom qualities are present: smooth moving, crisp animation, wonderful character design, overall good use of the CPS 2 Board, which has really been maximized by the developers, and the kick-ass Street Fighter game itself, underlying everything. Although it's just another 2D fighter for those who aren't paying attention, this is a fine new addition for true hard-core gameplayers.

Rating: ***



ed speed and createabl pleyers meke Hengtime e winner

between games, and power-ups are some of the cool fringe extrasbut they're not the central ones The pride of this new title is in its extensive Create a Player Mode. With choices ranging from

attributes (height, weight, speed, etc.), uniforms, names, stats, nicknames (Bubba, T-Rex), heads (including alien and cow heads) and privileges, you've got a lot of choosing to do before you actually play, but there is ostensibly more control of your player, Privileges include breaking the backboard. stealth turbo, big heads, super rebounds, and a mystery back door privilege. These choices make Hangtime more like a console same, and though you need an extra quarter to create this player, it'll be permanently recorded on that machine

If you like your basketball ple and straight, you can skip all the new stuff and play the game itself. And if you're a seri gamer you'll be able to create a player whose power increases throughout the game (when you win, of course). The gameplay is as good as ever, albeit the same as NBA Jam, It's just that the trouble with sports titles is that once they've made a good one, they're built upon, rather than begun again from scratch. This is a good upgrade with lots of extras Rating: ***

19XX

Publisher: Capcom Developer: Cepcom

Before the age of the 3D shooter arrives (if ever), companies like Fabtek, Data East, and Capcom will work in as many 2D features. to the never-say-die shooter as they're capable of

Witness 19XX, Capcom's new overhead shooter. Its clean looking animation, multilevel backgrounds, digitized explosions and various streams of patterned enemies place 19XX among the cream of the crop. And player control is faster and mo responsive than, say, Raiden II.

We'll be honest, however, and say that there's very little a developer can do to alter the shooter without changing the formula altogether, but there is something that sets this one

apart form the litary of carpelthreatening twitchies

The strategy here is to learn how to control the vanous built-in weapons that each aircraft (Lightning, a well-rounded fighter; Shinden, a speedy fighter; and Mosquito, slower but maxxed out in fire power) has been gifted not to depend entirely on powerups. Shoot and hold down the Marker Missile (the shooting button), and you'll release machine gun fire. Within seconds, a fat missile is released, followed by loads of arching, heat-seeking homing shots. Push the Bomb button and the defensive flash shall aliminates enemy fire nawer



Street Fighter moves are built into Cepcom's new shooter 19XX

keep it down and the bomb will charge into a screen-clearing warhead. The longer you hold after release, the more powerful the charge (most effective when you're on your last bomb and

you're close to beating a boss). Essentially, Capcom provides you with more variations in the ways you attack the bad guys. It's kinda like using Street Fighter's combo meter, but in a shooter, It's a breath of fresh air, a slight

break in the shooter routine that really sets this one apart. Rating: ***

SORRY

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Mobile Sut Gundom (Japan)

NBA Jam Tournament Edition

Every new 32-bit game rated by Next Generation's reviewers

** Dark Legends (Japan)

Cyberspeed

Daytona USA

Double Switch

Earthworm lim

Goloctic Attock

Gotho (Japan)

Hang-Dn GP '95

H-Detone

Affeb Welson

*** F-1 Live Information

Guardian Heroes (Ispan)

FIRE Some

Deadahs (Japan)

Accision

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Psyrnosis

Interplay

Didfrhai

Som Interactive

Sony Interactive

Bectronic Arts

SCF

he following list of review scores is designed to help you, the game player, make smarter buying decisions. Everyone knows that you can't judge a book by its cover, and it's becoming increasingly obvious that you can't judge a game by its packaging. Each title listed here has been exertisively playessed by a Next Generation.

staff member — you can trust the rating. Please note, however, that many of the games here are more than nine months old the games here are more than nine months old year, and many of them have been supercoded, ye sequels (Segal Virtus Fighter, Virtus Fighter, Virtus Fighter, Virtus Fighter, Vireus Fighter, Vireus Fighter, Vireus Fighter, Vireus Fighter, Vireus Fighter, Vireus Fighter, viewnit, two advises you to pick the nevest title, event, two advises you to pick the nevest title, event if the older game has a good review score. Also notes that if a title has the suffix (plaps), it is currently only vasibles as unimported title and work work with standard I. Sensirienzers.

imported title and wo								
imported title and wo US equipment.	e t work with st	andard	Power Serve 3-D Tenns	Ocean	***	Iron Storm	Working Design	****
O3 equipment.			Power Boseboll (Japan)	Konami	*	Johnny Bezooketone	US Gold	***
			Raiden	Seibu	**	Lost Glodiotors (Japan)	Kaze Co	****
Time	Pususies	NG RATING	Raymon	UbiSoft	****	Mansian of Hidden Souls	Sega	***
			Resident Evil	Сарсоля	****	Mortel Kombat II	Accisim	***
PlayStation			Ridge Rocer	Namco	****	Myst	SunSoft	***
Axie Warner	Virgin	**	Ridge Rocer Revolution (Japan)	Namco	**	NHI, All-Stor Hockey '96	Sega	**
Alten Trilogy	Acctum	****	Road Rash	Bectronic Arts	***	Nightwarnary: Darkstalkers R	nerge Capcom	***
A-Train	SCE	***	Ramonce of the Three Kingdon	s IV Koei	***	Off-World Interceptor	Crystal Dynamic	s ***
Aquancut's Holiday (Japan)	ArtDink	****	Shockwave Assault	Bectronic Arts	**	Ponzer Dragoon	Sega	****
Arc The Lod (Japan)	SCE	****	Sidewinder	Asmic	***	Pebble Beach Golf Links	Segs	***
Battle Arena Taylanden	SCE	****	Silverlode	Vic Tokai	***	Rigiard Sago (Japan)	Segs	***
Bottle Arena Tashinden 2	SCE	****	Space Griffan	Atlus	**	Quarterback Assack	Digital Pictures	***
Boxer's Road (Japan)	New Corp	***	Tekken	Namco	****	Sego Rolly Championship	Sega	****
Cosmic Roce (Japan)	Neorex	*	Total Eclipse Turbo	Crystal Dynamics	**	Skeleton Warners	Playmates	***
Cryme Crockers (Japan)	Sony Entertainme	nt **	Toukon Retsuden (Japan)	Torry	****	Shrnobr Legions	Segs	***
Criticom	Vic Toke	**	Teisted Metal	SIE	****	Shining Force	Working Designs	***
Cyberia	Interplay	***	Weepant	Bectronic Arts	*	SmCity	Macris	***
Cyberspeed	Mindscape	***	Warhawk	Sony Interactive	****	SteamGear Mosh	Takara (Japan)	**
Gyber Sied	Namco	**	Wipeout	Psygnosis	****	Street Fighter The Movie	Acclaim	***
Cyber Wor (Japan)	Coco Nuts	**	Warms	Ocean	****	Tomo (Japan)	Tengen	**
Defcom 5	Data East	****	WWF Wrestleman a	Acclaim	****	Theme Park	Electronic Arts	***
Dark Stalkers	Capcom	***	X-Com: UFO Defense	Microprose	****	ThunderStrike 2	US Gold	****
Descent	Interplay	****	Zero Divide	Zoom	***	Virtus Cop	Sega	****
Destruction Derby	Psygnosis	****				Wross Fighter	Segn	****
Doom	Williams	****	Saturn			Virtus Fighter Remix	Segn	****
Dragon Boil Z (Japan)	Banda	**	Astal	Sega	***	Virtua Fighter 2	Segn	****
Gex	Crystal Dynamics	***	Bottle Arena Toshinden	Takara	****	Virtus Roong	Time Warner	***
Gool Storm	Konami	****	Bottle Monster (Japan)	Naxat Soft	**	Virtual Hydide	Atius	**
Gunner's Heaven (Japan)	Media Vision	****	Blockfire	Soga	***	Virtual Volleyball (Japan)	Imagineer	*
In the Plant	Xing	*	Bug!	Sega	***	Wicked 18	Vic Tokai	***
In the Zone	Konam	***	Clockwork Knight	Sega	***	Wing Arms	Segs.	***
jumping Flosh!	SCE	*****	Clockwork Kreght 2 (Japan)	Segn	***	World Cop Golf Pro' Edition	US Gold	***

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World Series Baseball	Sega	****	Primal Rage	Time Warner	**	Dragon	Atari	***
Warldwide Soccer	Sega	***	Quarantine	GameTek	***	Fever Pach Soccer	Atten	***
X-Merc Children of the Atom	Capcom	***	Road Rash	EA	****	Fight for Life	Attari	**
			Rebel Assoult	Lucis Arts	**	FlipDut*	Atani	***
3DO			Samura: Shadown	Crystal Dynamic	***	Highlander	Atari	***
Alone in The Dark 2	Interplay	****	Scramble Cabra	Panasonic	**	Hover Strike	Atari	**
Basslesport	Studio 3DO	****	Seal of the Pharaoh	Panasonec	**	Iran Salder	Atari	***
Bladeforce	Studio 3DO	*****	Shanghar, The Great Wall	Activision	***	FWar	Atan	**
BC Rocers	Goldstar	*	Shock Wave	EA	**	Massin Command 3D	Azari	**
Burning Solder	Panasonic	**	Starfighter	Studio 3DO	****	Plefail The Mayon Adventures	Azari	****
Bust a Move	Parasonic	****	Diperation Jump Gate	EA	***	Power Drive Rolly	Time Warner	***
Connon Fodder	Virgin	****	Slam 74' Jam '95	Crystal Dynamic	****	Reymon	Atan	****
Captain Quazar	Studio 3DO	**	Soccer Kid	3DO	**	Rosser Pinball	Atari	***
Crime Potrol	Amencan Laser G	ames **	Space Hulk	EA	****	Supercross 3D	Atari	*
Cyberchillo	Parasonic	**	Space Pirates	American Laser C	Sames * **	Syndicate	Ocean	****
Cyberia	Interplay	***	Star Control II	Crystal Dynamic	***	Tempest 2000	Atari	****
D	Panasonic	**	Storblode	Panasonic	**	Theme Park	Ocean	**
Deathkeep	SSI	***	Station Invasion	Chib 3DO	***	Tray Askmon Featboll	Williams	**
Demoltion Man	Virgin	**	Super Street Fighter II Turbo	Panasonic	****	Val d'Isere Sking	Atari	**
Drug Wars	American Laser G	ames **	Super Wing Commander	Origin	****	White Men Can't jump	Trimark	***
Family Feud	GameTek	***	Supreme Warner	Digital Pictures	**	Walfenstein 3-D	Atan	**
Plans Nightmares	Domark	***	Syndicate	EA	****	Zool 2	Atan	***
RFA International Socorr	EA	****	The Daedahrs Encounter	Parasonic	***	Zoob	Vacom	***
Rashback	U.S. Gold	***	The Last Bounty Hunter	American Laser C	iames **			
Gex	Crystal Dynamics	****	Theme Park	EA	**	32X		
Ghost Hunter	Matsusheta	***	Trip 'D	Wrap	***	Brutol	Gametek	***
Guardian War	Panasonic	***	VR Stalker	American Laser C	iames***	Golf Magazine _Fred Couples	Sega	***
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Immercensiv	EA	***	Wolfesstein 3-D	ld/Logicware	**	NBA Jam Tournament Edition	Acclaim	***
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lommet	Screet Sports	**				Shadow Soundran	Sega	***
John Madden Featbell	EA	****	Jaguar			Stor Wors Arcade	Sega	***
Killing Time	Studio 3DO	****	Alten vs Predator	Atan	****	Super Afterburner	Segn	***
Kngdom The For Reaches	Interplay	**	Asov Korts	Atari	***	Super Space Horner	Sega	***
Lemmings	Psygnosis	****	Boldies CD	Asari	***	Virtuo Fighter	Segn	****
Lost Eden	Virgin Interactive	****	Battlemorph	CD	****	Virtue Roang Dekwe	Segs	***
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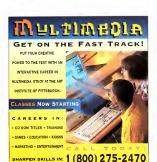
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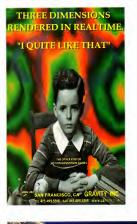
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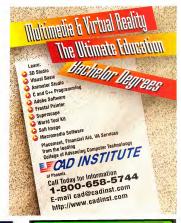


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Human writes

ot to sound like a nitpicker, but I found some things in your Lexicon [NG IS] that I felt I had to comment on. Here we go:

DRAM: VRAM is not the opposite of DRAM. The opposite of DRAM is SRAM, or Static RAM, Either DRAM or SRAM could be used for VRAM or basic RAM, but DRAM acrs differently. The "Dynamic" refers to the fact that you have to dynamically refresh the information contained in it every few (milli)seconds, whereas "Static" RAM is exactly that, static, with no need to be refreshed. While in some ways that would be a huge drawback. as the refresh requires extra hardware, and occasionally fancy timing (to avoid normal RAM reads and writes), the advantage of DRAM over SRAM is that each bit of RAM is comprised of fewer transistors, and therefore is more compact and cheaper to boot.

not have to have at least one button as the article stated. Or did Roc-Mon not have a joystick? Megabit Ah, if I did my mathright, a megabit is actually 1/2BK, not 2S6K. If a bit is 1/8th of a byte, then a megabit is 1/8th megabyte. 1024K (1 megabyte)

divided by 8 equals 128K. MegaDrive: Also the

MegaDrive. Also the japanese name for Sega Genesis. Realtime. Another occasional definition of realtime, in gaming terms, is where things progress in a temporal sequence and have no bearing on whether the player's benancer is here to winness it or not. In other words, Night Trap, where things go on in other rooms end if you sren't watching, would be considered realtime.



The Lexicon brought in a lot of letters from a diverse readersh

Second Party: A definition manalogous to the literary firsts, second-, and third-person viewpoints would make second-party games those programmed by the users themselves. This definition dies in the face of needing a way to refer to "tied houses" like SquareSoft. Now just to make sure I

don't sound like I know everything (which I can assure you I don't). I want more info about the MacOS for Genesis cartridge shown at Mac Hack. Who made that cart? Was it a hacker, or Apple itself?

Russ Perry. In.

Omro, WI

S omething I see in all the magazines and quite a few other places that has always bothered me, not that

Next Gen is responsible, or the first, to make the mistake is that MULD originally stood for Muld-User Database, not Durgeon. Back in the wee early years of MUDs, they were actually used as a business tool, ablet briefly because of the difficult interface, which only a hacker could have lowed. But it's something I think was due to be pointed out to "the powers that be." Iosh Zerlan Losh Zerlan Losh

Josh Zerlan inaba@pixelation.com

am writing to praise you on the gaming Lexicon in issue I S. This truly informative and inventive piece of work proves once again that Next Generation is the best magazine out there. However, I do have a couple of comments.

In your definition of "callerg" you state that the Super NES had the ability in hardware to scale sprites. I thought that the Super NES could only scale backgrounds and that the programmers had to use certain tricks to make it look like it was scaling sprites (for example, the scaling Bowser in Super Morio World was really a background, hence the black regular "Packground".

I also liked how you placed "Ultra 64" next to "Vaporware." You should have saved some ink and just said "see above/below."

Joe Stepsis

hat the hell was up with

your definition of the Commodore 64 [Lexicon, NG 16]? I know you said no that there will be discussion on the subject, but really, you owe it to us. How could you screw up so badly in your definition of such a great

machine. What, did Steve Wozniak write the definition? Brigid Willerer Detroit, MI

Thanks for your comments and corrections, although yes, some of them are "nis-picky" We've received an amazing response about the Lexicon, and what has pleased us most has been that after accrutiny by some of the most technical people in the industry, only a few minor retails have been found. We plan on correcting the Lexicon before it is pur some form the control of the plan on correcting the Lexicon before it is pur some form and distinct for next, year's edition. In reference to the

Commodore 64 definition, we would like to apologize to all the C64 faithful who we offended. We intended to let our resident Apple II chargings define the C64 and then let one of our Commodore people define the Apple II, which we thought would be funny. It probably would have been, too, if the Apple II definition had been done in the same style. Don't worry, we'll change the C64 definition in the online edition and future print editions of the Levicon As for the MacOS/Genesis

hack, it was definitely a non-Sega or Apple sponsored hack; you can read about it in the book "Late Night at MacHack."

was wondering if you could please send me Nintendo's address so I can tell it how mad I am about waiting until Soptember 30 for Nintendo 64's release. I'm really pissed off. I know you guys predicted that it would be held off until then, but I thought Howard Lincoln might be telling

Jacob Chaplow Palm Bay, FL

This is representative of the find of letters we've received in the wake of Nintendo's most recent delays currently the numbers are between four and five violently angry ones to each one that says, "Nintendo is doing the right thing; it's good that it's watering until the software is ready ext." To what exeten this will affect. Nintendo come September 30 is difficult to gauge but it's shifted in the control of the control

m I the only one who believes this or does anybody else besides me rhink that Nintendo 64 is just a glorified kiddle machine? Look at the games: Buggy Boogle, Kirby Ball, Morio Kart, etc. If I wanted to play kid's games I'd go to Chuck E Cheese's. Before long. Nintendo will make an interactive Barney sing-a-long cart. I'm 25 and have more than enough money to buy a N64, but if Nintendo is going to make games primarily for toddlers, I'll just stick with PlayStation.

James D'Piazza New Port Richey, FL

True enough, Killer Instinct notwithstanding. Nintendo is, and for that matter, always has positioned itself as the Disney of the game industry, resisting the aging of the game market with every fiber of its collective being. (Perhaps the high point of the Senate hearings on videogame violence was Howard Lincoln flatly stating that adults didn't play games.) Even when the games aren't overtly childish. nearly all the N64 games we've seen lack the hip, grittler edge of titles found on PlayStation and

Saturn. As a marketing strategy, aiming a \$250 console, \$80-plus carts, and an upcoming \$150 bulky drive add-on at a demographic, which couldn't possibly have the cash to afford it without help from Mommy and Daddy, seems shortsighted. The important fact to remember, however, was that the original Mario Kort and the 16-bit Kirby's Dreom Course were each a complete blast, in spite of the fact they were overly cute. So yes, there's little reason to suspect their 64-bit updates should be any different --- if you can get over the embarrassment of being seen playing them.

aw in your February issue the PlaySation to Registing a type of VR headset made by Virtual I/O. Before If seen the same thing for computers, but it costs like \$800! is the PlaySation headset going to cost that much! And how will it plug into the PlaySation! The controller ports? Also, will it have that sensory stuff so that you can turn your head and the game will turn like in a Doom game!

Jared Silva Bedford, Texas

Virtual I/O is indeed producing a headset that will be PlayStation compatible, and should retail for about \$399. Don't get too happy yet because the unit, which resembles an oversized pair of everlasses, is basically identical to the set the market calls VTV, or Virtual Television, and plugs into the AV jacks in the back of PlayStation (the same ones you'd use to connect it to your TV or stereo). It's lightweight and works extremely well, but in general the image is 2D, and the effect is much like putting a large-screen TV right in front of your eyes. However, it is possible for the unit to produce a 3D image if the video signal going in is properly configured, and PlayStation can produce that kind of signal if the designers program for it. Virtual I/O also makes a model that supports head tracking for the PC market. which retails for \$599, but currently has no plans to adapt this for use with PlayStation.

'm a loyal 3DO consumer, but the main reason I bought the system was in hope of M2. Now, it seems my hopes are fading. I've heard that it won't be coming out until the second half of this

year. Will it be worth the wait? Matt Oertli San Antonio, TX

That depends on how long you're willing to wait. According to sources at Matsushita Japan, while the company still plans on having some form of M2 console available in Japan by the end of the year, we probably won't see a US release until at least mid-'97. The official story from Matsushita is that negotiations with Redwood City, CA-based 3DO over the rights to the technology took so long that game development is lagging behind, and third-party developers have only begun to be lined up. This doesn't exactly square up with what we've seen, since six months ago we ran at least two previews on upcoming M2 games. Clayfighter 3 from Interplay and

Innibiod from Take 2.

We know of at least one other title, a sequel to D no Shokutoku, pius a few more from Soudo 3D, OH, the details of which are being kept quiet but which are definitely under development. Perhaps Thatsushita is suffering from the same 64-bit curse that's been affecting Nintendo, but whatever the reason, it seems M2 is solf a long.



ironblood (NG 10) was one of the first M2 titles previewed

irst, my compliments on a great article for folks interested in working in our industry. I think it will be a tremendous help to anyone who needs some guidance for "breaking in" to the business.

One thing you might want to relay to your readers, though, is that there are opportunities to meet key contacts at game development companies. These opportunities take the form of local game developer meetings, shows, and conferences.

The Computer Game Developer's Association web page (http://www.cgda.org) has a lissing of contacts for all local game developer meeting. There are often announcements of lost available at the Bay Area and Austin meeting. Another option is to attend conferences, though these can be expensive. I would recommend the Job Fair at the Computer Game Developers' Conference and E' as optimal for making industry contacts.

Ellen Guon Illusion Machines Inc. ellen@illusionmachines.com

This sn't the sole recommendation we've received — Jil Zinner of Premier Search, interviewed for the Advice from the Experts page in the same article, also mentioned it, as well as a few others. It is a great way to make contacts, but be aware, it also can be difficult to get your foot in the door, especially at conferences and trade shows — Er, for enstance, is theoretically closed to the public.

couldn't help but notice that recently the number of pages in NG dropped dramatically. Why!

Jamie Bensonpeck Los Angeles, CA

It's a simple case of revenue vs. expenses. There's a strict formula for determining the size of each issue by how many pages of ads are sold to cover printing costs. During winter and spring, hardware and game companies seend a lot less on advertisine.

hank you for your "How to get a job in the game industry" feature. I read it, applied to Sega, and now I have a job as a game tester. John Hurth

See? It's as easy as that.



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The way games ought to be ...

Hi-octane game theory by Chris Crawford

The spotlight is a fickle lover. But of all the game designers who have basked in the glow of public praise, which ones are still around to reap the rewards today?

ver computer and videogaming's comparatively short history, many game developers have enjoyed popular adulation. But whereas there are many one-hit wonders who have basked temporarily in the limelight, only a few have managed to keep up the page.

For every Peter Molyneux or Shigeru Myamoto born from the 1980's computer game revolution, there are countless others who have never managed to turn their 15 minutes of fame into a lifetime of achievement. So what makes the difference between the two?

Leo Christopherson was one of the earliest computer game designers. He published Android Nim in late 1978. In terms of depth and substance, Leo's game was nothing to write home about: just plain

was nothing to write home about: just plair old Nim. But its graphics were sensational. Leo turned the stacks sideways and replaced the static places with animated robots. Their little heads constantly moved back and forth, their eyes wandered, and they shifted stance. This was genuine animation on a TRS-80!

The reviewers went wild. This game was fabulous, it was magnificent, it was glorious. Leo basked in the approbation of the world. He was honored and admired. And then, a grain of sand, a gust of

wind, and Loo Christopherson was gone. He designed one or two more games, but they were straightforward repeats of Androld Nim. People lost interest in his cute little animated games. I never heard anything more of I en Christopherson.

Bob Bishop was one of the first Apple II programmers. He worked at Apple from the beginning and became one of the ploneers of graphics techniques on that machine. Bob used games to show off his graphics techniques. They weren't very impressive in terms of gameplay, but boy were they areazy in the graphics department. Bob's games did things that nobody had ever seen before. Apple II owners loved his stuff. They

Apple II owners loved his sturr. Iney bought everything he produced. They loved him. The magazines and reviewers gushed with praise. Awards showered down upon him. Bob Bishop was the darling of the Apple II community. And he was rich, too.

And then, a grain of sand, a gust of wind, and Bob Bishop was gone. His games were never much fun, and there were other games that offered more substance. Other people were learning some of Bob's tricks.

There is an uncountable number of grains of sand. The wind will never stop blowing. There are still those in our industry who follow the paths taken by these earlier stars. Some of them even now bask in acclaim and wealth

His work no longer had the same sizzle. Bob drifted away. I've heard that Bob is somewhere near Santa Cruz these days; I don't know what he's doing.

Nasir Geballi isciede un where Bob Bishop let drf. Nasir developed advanced graphics techniques for the Apple II. He was fast end prolific, gifnding out game after game on a time scale of months. An entire publisher, Sirius Software, was founded on Nasif's output. And what output It was I Nasir had developed dozens of thrist order squeezing the fastset animation out of the Apple. His games boasted fast, full-screen animation that no one else's games could match.

Nasir Gebelli was an ovemight sensation, he rivake in the royalties; wealth was his in a matter of months. His games were on every store shelf; they were reviewed in glowing terms in every magazine. Nasir Gebelli was a one-man gold mine. A game need merely have the simple tag line "By Nasir" to be assured of massive sales figures.

And then, a grain of sand, a gust of wind, and Nasir Gebelli was gone. Sometime around 1983 or 1984, in the general collapse of the game industry and the specific collapse of Sirius software, Nasir Gebelli disappeared from the scene. I don't know where he is now.

Greg Christenson was high school sudent when he burst used the scene. Bright, shy, and quiet, Greg put together just one game: Caverso of Mans for the Atani, it was a simple vertical scrolling game, not too officient from Defender. Advanced to the Atani, it was a simple vertical scrolling game, not too officient from Defender. Advanced to the Atanian from the programming, and using the manual from the Atanian from the Programming and the single very started with Defender, made it vertical, and the saddle filterating this and precise until the saddle filteration that the saddle filter

But the graphics were fantastic, it used many of the graphics capabilities of the Atan, and the result was impressive. Coverns of Mas soid a zillion coopies. Greg earned a ton of money. The pross loved him. Here was a high school kid programming a hit game in just eight weeks. Talk about a clinderells story Atarf gave him a \$25,000 award for the best game published by the Atari Program Exchange. Everybody wondered excitedly what this winderkind would accomplish in coming years.

But then, a grain of sand, a gust of

wind, and Greg Christenson was gone. I don't know what ever became of Greg. He just disappeared from the game scene.

John Harris was another wunderkind. I remember he came to one of my training seminars for the Atari computers in 1991, but no other memories stand out in my mind. Only a year later, John unleashed Jawbreskers on the world. It was a Pac-Khan clone, pure and simple. Jawbreskers was a beautiful game, better

than the Pac-Man that Atari itself produced. It had lovely music, beautiful animation, great sound effects — everything about this game was excellent. Or course, the design itself was a complete nothingburger — it was just plain old Pac-Man with a few minor embellishments. But who cared when the graphics were so great?

Jawbreakers generated quite a legal row between Atari and Sierra, which had published the title. The legal battle dragged on for some months, ending in a pyrhic victory for Sierra. John worte another game for Sierra, I believe. He was profiled in Steven Ley's book / Hackers, and there were, of course, the solulation and favorable reviews that so with creating a hit same.

reviews that go with creating a nit game. But then, a grain of sand, a gust of wind, and John Harris was gone. I've been told that he went to work for an advertising company, but that was years ago.

Jonathan Gay and Mark Stephen Pierce were a hot pair. Together, they were responsible for Dark Castle and Beyond Dark Castle, two of the hottest Macintosh games ever created. The games could not boast much in the way of creativity: they were, after all, straightforward running, jumping, and climbing games.

But they bristled with animation and digitized sounds at a time when such things were considered sinfully luxurious. And Macintosh players loved these two games. They bought a huge number of copies, dumping bushels of money all over Sillcon Beach Software. The two games collected every award around.

But now, a grain of sand, a gust of wind, and nothing is to be head from Jonsthan Gay and Mark Stephen Pierce. I don't know where they are now or what they're doing. One would have thought that after such great success, these two would go on to even greater things, creating even more sensational games, but that simply was not to be.

There is an uncountable number of grains of sand. The wind will never stop blowing. There are still those in our industry who follow the paths taken by these earlier stars. Some of them even now bask in accialm and wealth.





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have to use every.
but these bad guys.

you'll also

need plenty of brains to finish.

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biting,



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"I have great respect

for Microsoft.

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eat my lunch?

Sure."

Howard Lincoln.

president, Nintendo of America



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